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Photo Play SPIRIT 2.1

www.photoplay.com

Operation Instructions

POSITIVE GAMES
PHOTO PLAY®

funworld®

Table of contents

1. Operating Instructions

Always keep these operating instructions in a safe place for later use!

1.1 Introduction

These operating instructions apply especially to Photo Play touchscreen units. Replacement part numbers, service instructions and settings will be covered in more detail in a separate chapter. Should you encounter difficulties with regard to language or otherwise it is highly recommended to make use of the technical assistance provided by your dealer. The Photo Play is exclusively used as entertainment equipment!

Warning:

- Any changes to this unit require the written permission of the manufacturer.
- Subject to changes in the interest of technical progress, however no obligation for upgrading!
- Copyright by funworld ag, Photo Play Straße 1, A-4861 Schöfling, Austria.

funworld and their general importer will not accept any liability in the case of improper usage.

1.2 Safety instructions:

Failure to observe this may result in injury or death.

1.2.1 General explanations:

Work on the Photo Play unit may only be performed by authorised technical personnel so as to prevent injuries to persons or permanent damage to the unit. As an example, the possible results could be:

- Invalidity of the warranty
- Expensive repairs
- Replacement of components

The owner of the unit must undertake to ensure that all persons are familiar with the Photo Play prior to installation, start-up, maintenance and repair of the unit. Furthermore it is obligatory for him to have read and understood the technical description. **In addition he must ensure that the persons are suitably qualified. Only these persons must be in possession of the key for the covering hood**. The operating instructions must be kept in a safe place within easy reach for later use.

No liability for accidents, injuries and damages will be accepted in the case of incorrect usage such as for instance:

- Unauthorised conversion
- Incorrect handling
- Failure to observe the operating instructions!

Please contact your dealer should you have questions or doubts. You are requested to strictly adhere to the safety instructions since these concerns your own safety!

1.2.2 General safety instructions:

The unit must only be started after thorough perusal of the relevant description. Operating voltage and frequency must correspond to the values specified on the rating plate.

Connect the Photo Play Unit only to a properly installed, protected and earthed mains socket!

If instructions necessary for the safety are illegible or damaged, these must be replaced immediately. The Photo Play is only suitable for installation in closed (covered) and dry rooms. The Photo Play unit must be installed on firm and level ground. Incorrect installation may result in the unit tipping over. This may result in an implosion of the picture tube (not with Photo Play SMART)

Electric shock hazard
Any repair work (i.e. opening the unit) must only be performed by specially trained technical personnel. Components could still be live even after pulling the main's cord. Please observe the safety instructions to avoid injuries.

Fire hazard
Never cover the ventilation slits. The ambient temperature should not exceed 35°C. Do not overheat or overload the mains circuit.

In the case of a defect, always pull the mains cord immediately and have the repair carried out by authorised technical personnel.

- Always perform repairs on the dead system.
- Use only original replacement parts
- Pull the mains plug only with the unit switched off.

Failure of observing the safety instructions may pose serious danger!

1.3 Unit check:

1.3.1 Inspection after delivery:

Check the Photo Play units for possible transport damages immediately on delivery. Visible damages must be noted on the delivery documents with the sentence "conditionally excepted" in order to secure your claims.

1.3.2 Unit check

Ensure that the mains plug including cable is in accordance with the national standard.

Electric shock hazard
The main's plug must only be connected by authorised technical personnel.

1.4 Transport and place of installation:

The place of installation must be enclosed (covered) and dry. It is strictly forbidden to install the Photo Play units in moist / wet rooms. This could lead to accidents (electrical shock).

Prior to installation, please check the following:

- Level underground of adequate carrying capacity.
- Free access to the unit.
- Ventilation slits are not blocked.

Do not install Photo Play units...

...in the vicinity of vitally necessary installations such as:
- Emergency exits
- Fire extinguishers
- First aid kits

...heat sources such as
- Heater elements
- Air conditioning systems
- Sun terraces
- Severe solar radiation

...in severe environmental conditions such as
- Dust and dirt
- Rain and wet
- Severe magnetism or radio waves
- Heat (ambient temperature above 35°C)

Warning: The socket must be well earthed! Install the power supply cable so as to exclude injuries and damage to the mains cable.

Mains cable damage can be caused by:

- Kinking of the cable
- By placing heavy parts on the cable

1.5 Installation and Assembly:

Plug in the mains supply cable only after completed installation! **Allow the Photo Play unit to acclimate for at least four hours.**

1.5.1 Assembly

The Photo Play unit is supplied completely assembled. No assembly work is required.

1.6 Start-up:

After completed unit check (see paragraph 1.3), switch on the unit. Immediately pull the mains plug if there are signs of smoke development, whistling, pungent odour. If you encounter problems, please contact your general importer immediately.

The following hazards are possible.

Fire hazard
Immediately pull the mains plug if there are signs of smoke development!

Electric shock hazard
Observe safety instructions!

The specific settings for the unit are described in the "Technical Description" (Paragraph 3).

1.6.1 Activation of the Photo Play NET (see enclosure Photo Play net activating)

1.7 Inspection, maintenance and care:

1.7.1 General Instructions:

Electric shock hazard
Observe safety instructions!

Verify that mains socket is well earthed. Immediately shut down the unit if there is visible damage to the mains power supply cable of the Photo Play unit. Repairs to the mains cable must only be carried out by qualified electrical personnel. Verify presence and legibility of warning instructions and rating plate.

1.7.2 Maintenance

The Photo Play unit does not require any maintenance.

Warning: There are various adhesive labels and printed texts, which could be subject to, wear. Please check on a regular basis to ensure that the safety instructions are complete and contact your general importer if you have any requirements in this regard.

1.7.3 Care

Clean the casing and the touchscreen glass with a soft cleaning cloth and a cleaning agent (non-acetic).

1.8 Service:

Electric shock hazard
Observe safety instructions!

1.8.1 Replacement of Components:

- Immediately pull the mains plug
- Replace parts only with original replacement parts
- The order numbers can be found in the "Technical description" (refer Paragraph 3)

Please contact your general importer if in doubt.

1.9. Taking out of Operation:

Electric shock hazard
Observe safety instructions!

1.9.1 Disassembly

Isolate power supply cable from mains and store in cardboard box.

1.9.2 Relocation

Observe paragraphs 1.4, 1.5, 1.6 for re-installation and whenever starting up again.

1.9.3 Disposal

Environmental protection
Please dispose of pallet and cardboard boxes in accordance with the applicable laws.

2. General data

2.1 Supply components

- 1 Photo Play SPIRIT 2.1
- Two sets of keys (cashbox and service)
- Mains power supply cable in the cash box
- Description
- Telephone cable

Note: The keys are in a self-adhesive plastic bag stuck onto the rear of the unit.

2.2 General importers of the individual countries:

Under the following address you can find your local General Importer:

www.funworld.at

3. Technical description

3.1 Technical Data:

Voltage:	AC ~220 V/50 Hz(± 10 %)
Power Consumption:	100 VA
Max. Volume Control:	70 dB
Monitor:	19", 0.26mm, resolution: 800x600/85Hz
	UL, C-UL, EPA, FCC pt.15 compliant
Operational Conditions:	Relative humidity: 20 % to 80 %
	Ambient temperature: 10°C to 35°C
Storing Conditions:	Relative humidity: 20 % to 90 %
	Ambient temperature: -25°C to +70°C
Power Supply Unit:	input: AC 220 V/50 Hz
	output: DC +5V/20A (red)
	Power Good Signal (orange)
	-5V/0,5A (white)
	+12V/8A (yellow)
	-12V/0,5A (blue)
Measurements (h x w x d):	Photo Play SPIRIT 2.1: 153 x 58.5 x 70 cm
Net weight:	Photo Play SPIRIT 2.1: 95 kg

3.2 Programme sequence, programme settings/set-up

Having been successfully started, the Photo Play unit is ready for operation, displaying various images and pre-defined advertising on the screen. As soon as the Photo Play unit is in standby, coins can be inserted at any time. In standby mode, the various groups of games appear irrespective of whether there are credits or not. In order to select a group, the player touches the image of the group on the screen. The games of this group will become visible. The individual games in turn are selected by touching the Game field on the monitor. The starting screen of each game appears after selection. With some games it is also possible to select from several players. If sufficient credits are available for the selected game, the game may be started.

Info-Button:
By touching the info-button on the screen, more information is made available to the player.
All time High-Score: here the highest scores gained by the players are shown.
Friends of Photo Play: Information about Friends of Photo Play.
Contacts: Information about our General Distributors.

High-score screen,
At the end of the game the player may enter his name in a high-score list provided the score is high enough (dependent on the previously achieved game scores). The player may attempt to become top scorer in his favourite game.

Set-up:
Press the "Set-up" button in order to activate the setup screen. This button is located below the screen, behind to the data print connector.

The setup starting screen has five selection fields:

1. **Game settings:** Selection of games and credits / game.
2. **Accounts/statistics**: Accessing the booking and statistics / data print.
3. **Photo Play technical**: Selection from various test options.
4. **Advertising**: Input of advertising pages.
5. **Miscellaneous settings**: Input of codes

1.) Games settings:

- **Games (credits)**: By marking the desired game it is possible to select the credit setting or activation (enabled/disabled) for that game. Here it is also possible to set the games to free game (credit 0 = free game). In addition it is possible - for instance for testing purposes – to set all games simultaneously to the desired credit (settings for all games 0 = free game)
- **fun.link free credit**: Only possible in fun.link mode. It is possible to enable or disable to obtain the fun.link free credit. If at least 4 players are playing fun.link, the winner will receive a free credit provided the fun.link free credit is enabled.
- **High-score delete mode:** Set whether to delete the high-score automatically or after a certain time, or whether to reset manually.

- **Delete all high-scores:** The high-scores of all players are deleted.

- **Delete individual high-scores:** The high-score of the respective player is deleted by touching.

2.) Accounts / statistics
A summary of accounts and statistics is available by selecting this field.

Short summary:
- Financial account
- Value settings
- Game statistics
- Photo Play utilisation
- Unit number

- Data print
- Deleting accounts and statistics
- Deleting accounts
- Deleting statistics
- Deleting credits

- **Financial accounts**: This serves to read off the quantity inserted per coin. It is possible to see the total quantity of coins inserted.

- **Value settings**: In the Photo Play setup it is possible to freely set the bonus system. The bonus stages allowed are left up to the installer.

  Photo Play bonus system setting: There are two basic settings; it is up to the individual to customise the system to his requirements. It is possible to process a list structured as follows:

Insertion (Euro)	Credits
1	1
2	3
3	5

Game costs 1 Euro

In order to prevent an incorrect entry by the user, the setting is carefully checked for correctness. The most common error made is a bonus stage at which the player has to pay more than at the previous bonus stage. This means: if you were to enter for instance only 25 credits for 20 Euro in the upper list, the Photo Play will recognise that the player would have to pay more for a game with 20 Euro than with 10 Euro. If such an entry is made, you will be requested to change it accordingly.

- **Game statistic**: This statistic shows how often a certain game has been played (also in %). Mark the desired game and press "OK" to be able to read how often one player, two players, three players, four players or > fun.link have played that game. In addition this module also calculates the shortest, average, longest time taken by a player for that game.

- **Photo Play utilisation**: This statistic provides information on the utilisation of your Photo Play on a certain day, month or throughout the year.
- **Unit number**: This is where you enter the Photo Play unit number.
- **Data print**: Here you can read the accounts data or the statistics of the individual games by means of a printout. A "data print 3000S" is required for this purpose! This data print is available through your general importer.
- **Deleting accounts and statistics**: This serves to delete accounts and statistics.
- **Delete account**: Delete accounts
- **Delete statistics**: Delete statistics
- **Delete credits**: Delete possible credits on the unit.

3.) Photo Play Technology

Selecting this field affords a summary of the technical settings available.

Short summary:

- Basic calibration
- Volume control
- Idle music (general)
- Idle music (with time limit)
- Date and time
- Test Screen
- Test credits
- Touchscreen test 1

- Touchscreen test 2
- fun.link test

- **Basic Calibration**: This setup option serves to calibrate the touchscreen. The screen has to be calibrated when the machine has the normal operation temperature.
  - Press setup button
  - Select "Photo Play technology"
  - Press OK
  - Mark the line "basic calibration"
  - Press OK
  - Touch the picture
  - Touch the point of intersection at the bottom left. Wait for the hairline cross at the top right. Now touch the point of intersection and press the OK button.

- **Volume control**: The volume can be changed by "+" or "-" with "  " it is possible to listen to the set volume. Furthermore it is possible to test the loudspeakers on the left and right.
- **Idle music (general)**: This is always played whenever the Photo Play is in "standby" mode. Here it is also possible to enable or disable the idle music.
- **Idle music (with time limit)**: This is played over a certain period of time in "standby" mode (for instance Christmas music from 1 December to 31 December) but only if the idle music (general) has been enabled.
- **Date and time**: Setting of current date and time.
- **Test screen**: The test screen is required in order to accurately set the picture size and width. Furthermore the three basic colours (red, green, blue) are also displayed. There are various test pictures for the respective colours and settings of the picture. This picture serves only for test purposes!
- **Test credits**: This is used to apply test credits (e.g. for service purposes) to the Photo Play without having such registered in the accounts and on the counter.
- **Touchscreen test 1**: The point must be exactly under the finger.
- **Touchscreen test 2:** The finger must be exactly in the centre of the square.
- **Photo Play long-term test**: On activating the long-term test the Photo Play plays spontaneously until again switched off and on.
- **fun.link test**: This test is only possible in fun.link mode. By sending 100 data packets to the units within the fun.link it verifies whether the fun.link network is OK. A transfer protocol is generated for the sending of the packets, showing possible sources of errors immediately. Fun.link operation may commence when each unit has received all 100 data packets.

4) Advertising:

This selection field permits the user to enter ten advertising pages. Each page contains a maximum of 10 lines and characters depending on the screen width. These 10 lines can be moved over the advertising page as desired. Different colours and sizes and fonts are possible.

Instructions:

- Press setup button
- Select advertising
- Press OK button
- Select advertising page – you are now in the input mode.
- Enter a maximum of 10 lines
- By touching a certain selection field you can select the "background" (various motives) and the " display time" (in seconds)
- By touching the "delete" button it is possible to delete certain pages.

5) Miscellaneous Settings

- **Installer code:** If the installer code is enabled, the most important settings in Setup are protected with this code.
  Warning: Never forget the code you entered, otherwise you have no way of accessing Accounts (except calibrating touchscreen). Should you forget your code you will have to take the hard disk to your general importer.

- **Minimum setup code**: With this code it is possible to set up three adverts and the volume without accessing setup.

  Short summary:

  - Setting minimum setup code in setup
  - Alternately press (starting screen) the respective flags.
  - Enter minimum setup code.
  - Enter adverts (maximum 3, see paragraph 4)
  - Set the volume (+/- 3 from the default setting in Setup)

- **Language setting**: Up to 3 languages may be activated depending on the country version.

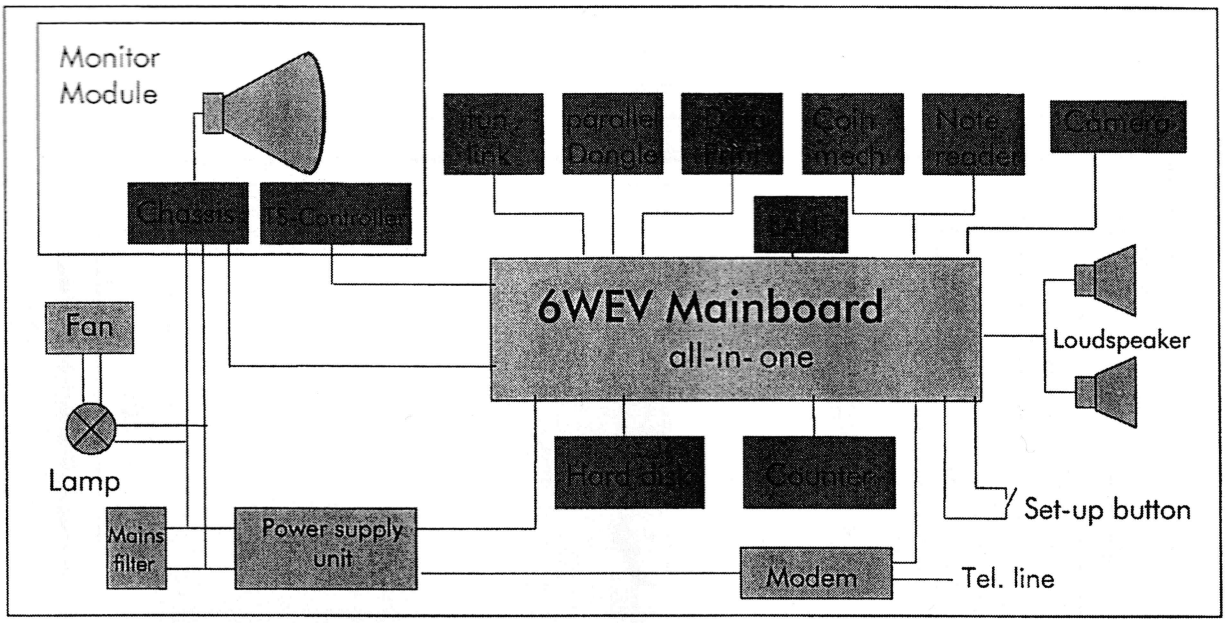
- **Select profile**: Various coin profiles or country profiles are available.

3.3 Games:

Programme change: The programme is upgraded by the general agencies of the individual distribution countries! Current programmes can be obtained through the general agents.

3.4 Technical data:

3.4.1 Block diagram



3.4.2 Technical Components

Mainboard:

- all-in-one mainboard AT-form factor
- 333 MHz CPU Pentium compatible
- Fan with CPU temperature control
- Two PCI slots
- AMR slot
- 16MB or 32 MB main memory (SDRAM)
- 4 serial interfaces
- 1 parallel interface
- 2 funworld custom interfaces
- Cable for serial interface, cable for parallel interface
- 64 bit 2D VGA
- ESS 1869 ISA Audio Chip, 2x 2, 8W sine ; SoundBlaster Pro comp.
- Speaker out, Line out, Mic-In

SVGA Monitor:

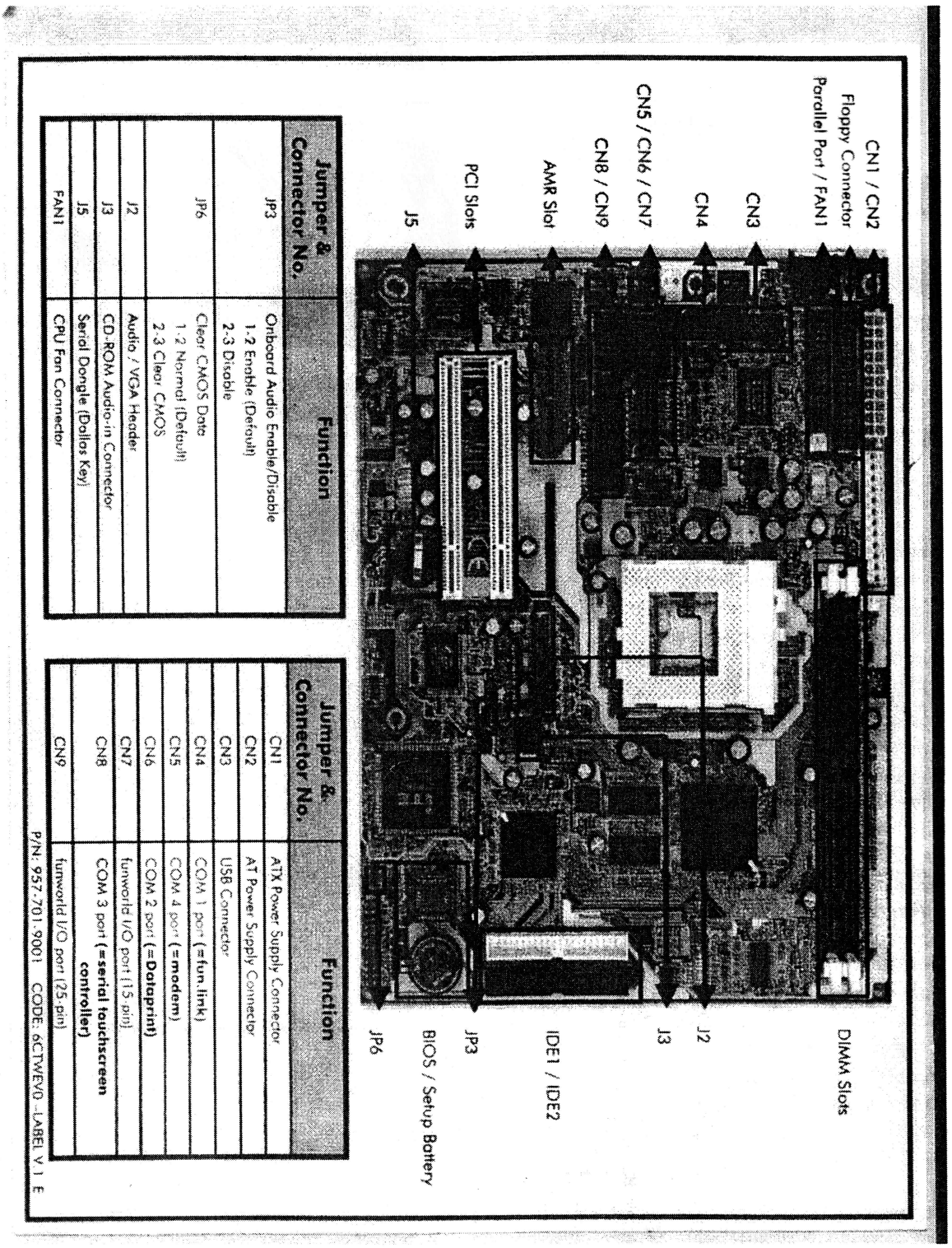
- Supply AC 90-240 V / 50 or 60 Hz / 150W max.
- OSD control (incl. Size, Position, Rotation, Geometry, Moire, Degauss, Colour temperature)
- Band width: 160 MHz
- Horizontal frequency: 30 – 96 KHz
- Vertical frequency: 50-160 Hz
- 19" tube, 0.25 dot pitch, Anti Reflection and Anti static coated
- VESA DPMS compatible

Touchscreen: Elo iTouch on-tube system with serial controller

Coin mech options: ☐Electronic coin mech Coin control C120
☐Electronic coin mech NRI G 13.1001
☐Electronic coin mech SECCI

Banknote reader: Banknote Reader SMILE NV4

Mainboard:



Jumper & Connector No.	Function
JP3	Onboard Audio Enable/Disable 1-2 Enable (Default) 2-3 Disable
JP6	Clear CMOS Data 1-2 Normal (Default) 2-3 Clear CMOS
J2	Audio / VGA Header
J3	CD-ROM Audio-in Connector
J5	Serial Dongle (Dallas Key)
FAN1	CPU Fan Connector

Jumper & Connector No.	Function
CN1	ATX Power Supply Connector
CN2	AT Power Supply Connector
CN3	USB Connector
CN4	COM 1 port (=fun_link)
CN5	COM 4 port (=modem)
CN6	COM 2 port (=Dataprint)
CN7	funworld I/O port (15 pin)
CN8	COM 3 port (=serial touchscreen controller)
CN9	funworld I/O port (25-pin)

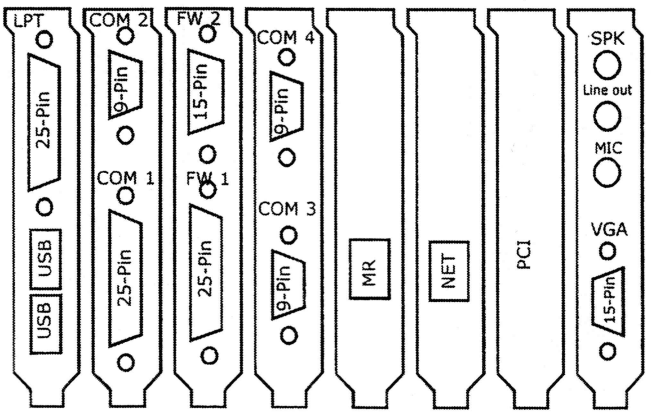
P/N: 957-701-9001 CODE: 6CTWEV0 -LABEL V 1 E

3.4.3 Slot Layout Photo Play SPIRIT 2.1

Connectors on Slotplate:

Name			Place
Keybd.	5pin DIN		0
Power out	3 pin AMP		0
LPT USB USB		Slotplate	1
COM 1 COM 2	25 pol 9 pol	Slotplate	2
Fun I/O Fun I/O	15 pol 25 pol	Slotplate	3
COM 3 COM 4	9 pol 9 pol	Slotplate	4
MR		Slotplate	5
LAN		Slotplate	6
PCI		Slotplate reserved	7
Speaker Mic in Line out VGA		Slotplate	8

Slot Layout



3.4.4 BIOS settings

Connect a PC keyboard to the 5-pin DIN-keyboard jack and switch on the unit. During the funworld logo, press the "Del"-key. The BIOS menu appears. Get to the funworld setting via "Load setup defaults"

Set Up Screens

CMOS Setup Utility- Copyright © 1984 – 2000 Award Software

▯ Standard CMOS Features	▯ SeePU Setup
▯ Advanced BIOS Features	▯ Load Fail-Safe Defaults
▯ Advanced Chipset Features	▯ Load Optimized Defaults
▯ Integrated Peripherals	▯ Set Supervisor password
▯ Power Management Setup	▯ Set User password
▯ PnP/PCI Configurations	▯ Save & Exit Setup
▯ PC Health Status	▯ Exit without Saving

Esc : Quit — Select Item
F10 : Save & Exit Setup

Time, Date, hard Disk Type

CMOS Setup Utility- Copyright © 1984 – 2000 Award Software
Standard CMOS Features

		Item Help
Date	xxxxxxxx	
Time	xxxxxxxx	
IDE Primary Master	Press Enter	
IDE Primary Slave	Press Enter	
IDE Secondary Master	Press Enter	
IDE Secondary Slave	Press Enter	
Drive A	None	
Drive B	None	
Video	EGA/VGA	
Halt On	No Errors	
Base Memory		
Extended Memory		
Total Memory		

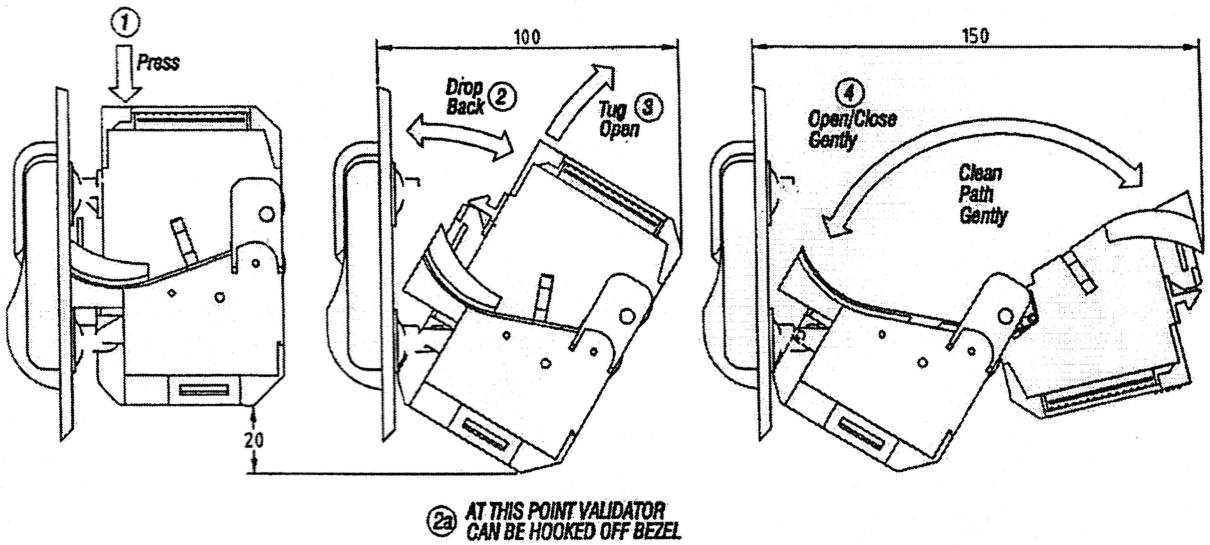
CMOS Setup Utility- Copyright © 1984 – 2000 Award Software
IDE Primary Master

		Item Help
IDE HDD Auto Detection	Press Enter	
IDE Primary Master	Auto	
Access Mode	Normal	

CMOS Setup Utility- Copyright © 1984 – 2000 Award Software
Integrated Peripherals

		Item Help
IDE HDD Block Mode	Enabled	
On-Chip Primary PCI IDE	Enabled	
On-Chip Secondary PCI IDE	Enabled	
IDE	Auto	
...		
IDE	Auto	
USB Controller	Disabled	
...		
Funworld I/O Adress	210h	
Onboard Serial Port 1	3F8h / IRQ4	
Onboard Serial Port 2	2F8h / IRQ3	
Onboard Serial Port 3	3E8h / IRQ3	
Onboard Serial Port 4	2E8h / IRQ10	
Parallel Port Mode	EPP 1.7	

3.4.5 Banknote reader NV4



I. Programming

The NV4 banknote reader is normally supplied ex works to a pre-programmed status. The electronic pre-programming can ensure a constant high rate of acceptance, which is around 95% approx., dependent on the currency involved.
The banknote reader can still be manually programmed, independent of any previous pre-programming. And, any subsequent, unauthorized manually manipulative programming can be prevented by means of employing an appropriate coding.

I.I Programming by means of a personal computer or laptop equipment
The most simple and rapid method of programming the NV4 banknote reader with a new issue of banknote or with a completely different currency, is to use the PC Download Software. For this purpose, the Windows 95 operating system and, at least a Pentium 75 mHz processor will be required, having a free serial interface.
The PC Download Software, which includes the various ex gratia data records required for a variety of currencies together with the associated test box, can also be ordered from DYNAMICS Chinatec Systemtechnik GmbH (Dynamics Chinatec Systems Inc.).

I.II Programming directly into the NV4 banknote reader (manually)

When the banknote reader is to be manually programmed, a larger amount of data material is to be available for the banknotes to be programmed. We would recommend 30 to 40 items per banknote value. Before commencing programming, it is recommended to erase the relative channel, otherwise the subsequently programmed banknote will be added to the older banknotes of the channel previously selected. This would mean, that both issues of banknote would then become acceptable on the one channel.

I.II.I Erasing channels

Caution: the erasing of a channel is definitive and final and cannot then be subsequently reversed!

Set the wiper switch to TEACH	In this mode, no channel will be activated and shown by the lighting up of a LED. This is to avoid the occurrence of any unwanted programming as a result of a mistaken switchover from "RUN" to "TEACH"
SELECT Key	The required channel can be activated by pressing on the "SELECT" Key until the relative LED lights up. Then, keep the "SELECT" Key depressed until the LED extinguishes again after around 6 seconds.

LED lights up again	This signals that the channel is erased and new programming parameters can then be entered.

I.II.II Programming a new banknote

Before the NV4 can be newly programmed, check that no possible limitations already exist on the list of qualified banknotes in regard to the currency concerned. If the banknote is not listed, this means that no tests have been carried out. For this reason, any possible problems will not show up. Users should take care to ensure, that a non-programmed banknote reader will always correspond to their own requirements and security standards.

Preparations:
Ensure that the NV4 is switched on. The VCOM should be operative and the block lines on "LOW" status.
At least 30 banknotes will be required for programming purposes, preferably use 40 banknotes.
Of these:

Uncirculated mint notes:	15 items
Circulated used banknotes:	25 or more (circulated banknotes in average condition)

The following should not be used for programming purposes:

- untypical, old or worn out banknotes;
- banknotes, where corners or fragments are missing;
- banknotes with deep fold marks or turned-up corners;
- banknotes repaired with adhesive tape.

The correct selection of the banknotes used for programming is vital for the degree of acceptance under conditions of subsequent operations. Sort the banknotes for programming purposes at the same time and in the same direction. Those banknotes having the same value but a different design and image, should not be mixed up together. The different designs should be programmed on separate pages in the same channel.

Channel selection and subsequent programming:

The display illumination lights up	This indicates, that the equipment has electric power.
Set the wiper switch to TEACH	Keep pressing on the "SELECT" Key until the required channel is signaled by the burning of the relative LED. Then insert the appropriately prepared banknote as straight and centered as possible.
Obverse and reverse directions:	All banknotes should have the same obverse side upwards and show in the same direction. The first banknote must have left the banknote reader before attempting to insert the next. Dependent on the number of programmed banknotes, the procedure can be repeated with the same banknote.
SELECT Key	Press briefly on the key. The channel LED will flash once to signal, that the data of that obverse side of the banknote have been saved. Repeat the programming procedure in the reverse direction.
SELECT Key	Briefly press the key and the side will be saved. Repeat the programming with altered read-in direction.
Set wiper switch to RUN	The channel display LEDs are now in the SECURITY Mode and the acceptance band width is now shown by means of the LEDs: (LOW, STANDARD, HIGH).
SELECT Key	Press down on the key until the required acceptance band width is displayed: (LOW, STANDARD, HIGH) When the fourth LED, "INHIBIT", illuminates, the pre-set channel can be blocked.
LED flashes	The STANDARD mode of acceptance bank width is operational when the wiper switch has been set to RUN. If this setting is not altered, the LED will flash after five seconds. The LED will cease

flashing after 3 seconds and the banknote reader is then operational. Should the acceptance band width be altered, the relative LED will also flash and the banknote reader will become operational when the LED ceases to burn.

In the cases of some currencies, it can occur, that banknotes might be rejected in spite of correct insertion in the banknote reader. This can be the result of changes in the characteristics and colorings of the banknote with increasing age. It is therefore recommendable to sort the banknotes according to various degrees of condition and to program all such conditions separate on different pages.

WARNING: When the banknotes are inserted too rapidly or if the information of the banknote cannot be correctly read by the banknote reader, then all the LEDs will light up together. This means, that the banknote was not accepted and, that a repeat insertion is necessary.

I.II.III Programming banknotes of the same value on one channel

When a banknote is replaced with a new issue, e.g. FIM 50.00 "old" is replaced with a FIM 50.00 "new", both issues of banknote usually, as a rule continue in circulation. The possibility exists of also programming the "new" banknote manually into the NV4, so that the NV4 will accept both issues of banknote during the transition time period. (the programming can also be effected, of course with the Download Software).

As many pages as required can be programmed per channel, so long as the total number of pages of sixty three pages on all channels is not exceed. This means, that fifteen pages per channel can be occupied (63 pages / 4 channels = 15.75 pages). If, for example, the "old" FIM 50.00 banknote is stored on Channel 2, then the "new" FIM 50.00 banknote can then be subsequently programmed without difficulty.

Please carry out the programming as described in Chapter 1.

I.II.IV Checking the band width setting

The NV4 possesses three degrees of sensitivity. The first degree of sensitivity (LOW) corresponds to a broad band width and will ensure a high acceptance rate together with a perhaps rather insufficiently low rejection rate of falsifications. The middle degree of sensitivity is adopted as a STANDARD setting and is recommend for most applications. The third degree of sensitivity (HIGH) will render the acceptance rate somewhat lower, but critical falsifications will be more readily rejected.

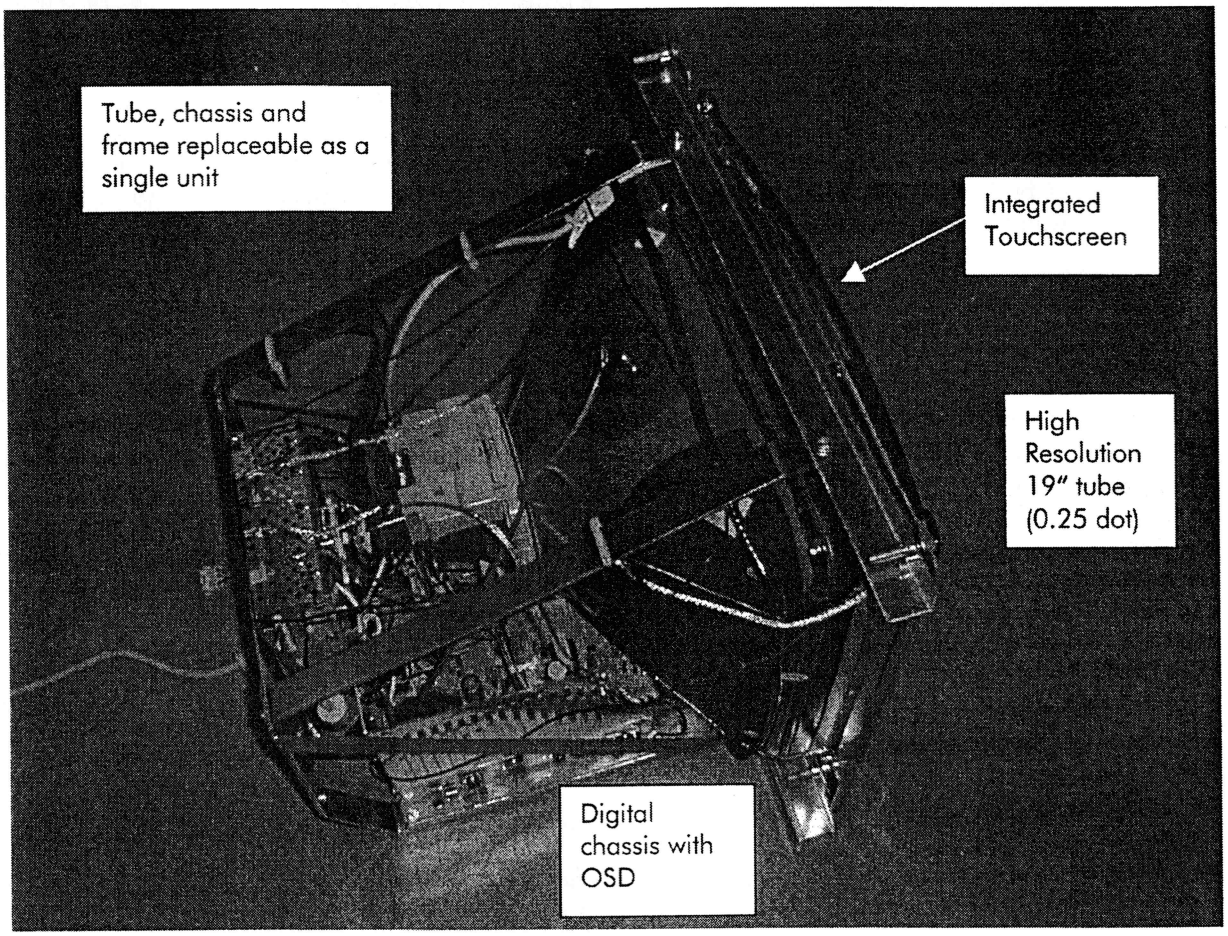
Set the wiper switch to TEACH	
SELECT Key	Use to select the verification channel.
Set the wiper switch to RUN	The pre-set sensitivity LOW, STANDARD, HIGH will be signaled by the relative LED. The alteration of the band width can now be effected by depressing the SELECT Key.
	The SELECT Key is depressed until the degree of sensitivity (LOW/STANDARD/HIGH) is indicated by the illumination of the relative LED.
	When the LED is extinguished, the NV4 will be able to recognize and accept banknotes by means of the selected band width.

I.II.V Blocking a channel (internally)

Set the wiper switch to TEACH	
SELECT Key	Select the verification channel required.
Set the wiper switch to RUN	The pre-set sensitivity LOW, STANDARD, HIGH and INHIBIT is then signaled by the relative LED.
	The SELECT Key should be pressed until the LED 4 burns.
	When the LED 4 extinguishes, the NV4 will reject the banknote of the blocked channel.

3.4.6 Touchscreen

Monitor Module



- **General:**

Technology:	Surface Acoustic Wave
Resolution:	4095 x 4095 contact points plus Z-axis
Speed:	At least 100 contacts per second
Active contact area:	Whole Screen
Transmittance:	100%

- **Sensor description** — Sensor: Integrated on-screen (iTouch). No parallax error. No drift. Not affected by static discharge. Functions without earth connection. Does not average out double touches.

- **Serial controller**: — Installed in the monitor module and powered from the chassis. Communication: By-directional via a serial RS 232 interface.

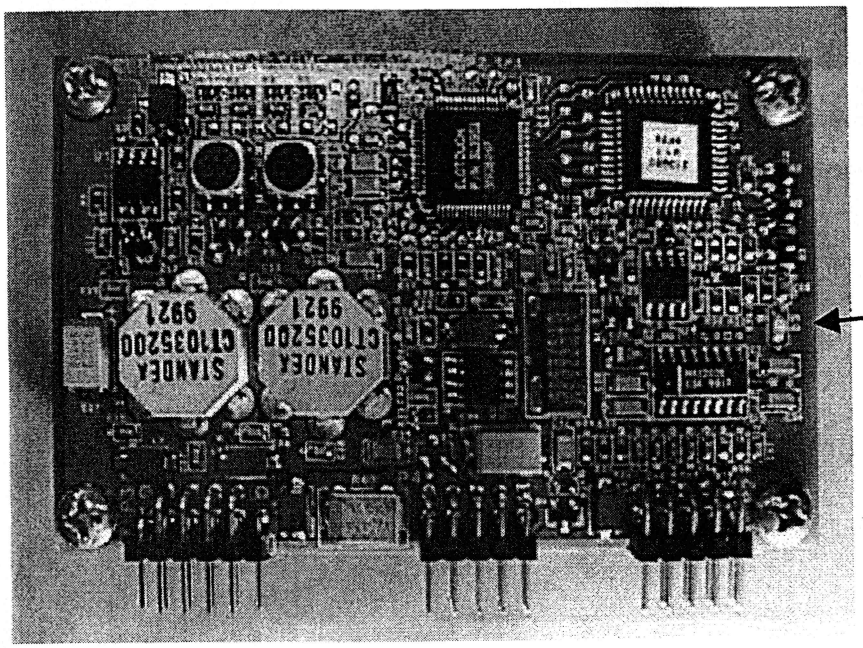
- **Sensor repair**: — The transducers are repairable by a qualified technician.

- **Operational safety**:

MTBF:	More than 80 000 hours
FCC – registration:	Class A
Service Life:	More than 5 Million contacts on any individual point.
Operating temperature:	Controller card 0°C to 55°C
Relative Humidity:	0 – 95% non-condensing
Storage temperature:	Controller minus 20°C to 85°C

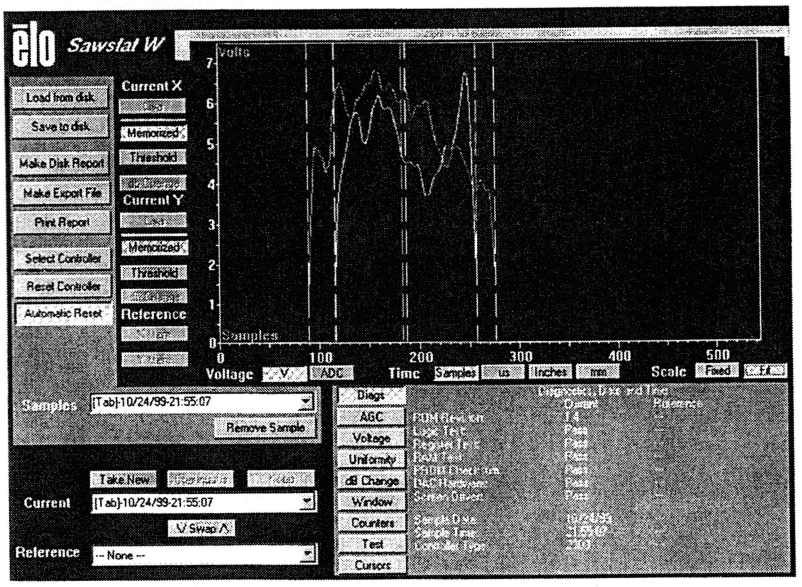
All marks are registered trade-marks of the respective manufacturers.

Controller Board:



The following touchscreen diagnostic Programs are available:

Sawstat (Windows 98/NT): General diagnostics



Comdump: Com Port test

```
    COMDUMP (1.0) - Elo TouchSystems COM Port Dump Diagnostic for funworld
Port: COM3
Baud: 9600
Mode: Hex
Hshk: DSR CTS
Type: [ESC] to quit

[55][54][81][8E][02][4C][0B][66][00][21][55][54][82][8E][02][4C][0B][C6][00][82]
[55][54][82][8D][02][4C][0B][E0][00][9B][55][54][82][8D][02][4C][0B][ED][00][A8]
[55][54][82][8D][02][4C][0B][F5][00][B0][55][54][82][8B][02][4C][0B][FA][00][B3]
[55][54][82][8B][02][4C][0B][FE][00][B7][55][54][82][8B][02][4C][0B][FF][00][B8]
[55][54][82][8B][02][4C][0B][FF][00][B8][55][54][82][8B][02][4C][0B][FF][00][B8]
[55][54][82][8B][02][4C][0B][F0][00][A9][55][54][84][8B][02][4C][0B][00][00][BB]
[55][54][81][06][0B][22][03][73][00][7D][55][54][82][06][0B][22][03][E0][00][EB]
[55][54][82][06][0B][22][03][F2][00][FD][55][54][82][06][0B][22][03][FB][00][06]
[55][54][82][06][0B][22][03][FE][00][09][55][54][82][06][0B][21][03][FF][00][09]
[55][54][82][06][0B][21][03][FF][00][09][55][54][82][06][0B][21][03][FF][00][09]
[55][54][82][06][0B][1F][03][FF][00][07][55][54][82][06][0B][1F][03][E2][00][EA]
[55][54][84][06][0B][1F][03][00][00][0A]
```

Sawdump: Function Test and Save to disc

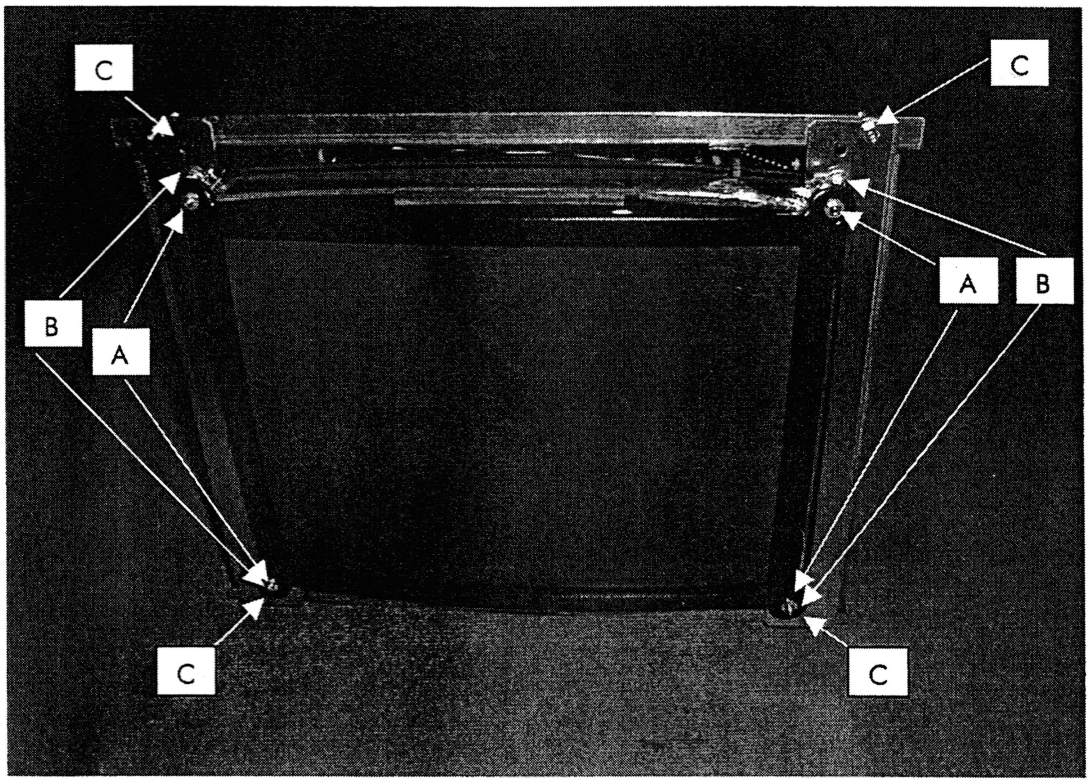
```
 SAWDUMP 1.00 - IntelliTouch(R) Diagnostic Utility for funworld
 Copyright (C) 2000 Elo TouchSystems, Inc. All rights reserved.

2500S (S/N SST3A3E343035) SmartSet controller found at above settings.
Controller Test Results:
     ROM Revision:   1.5-0.0          Ctr 1, Reported:       0
     Logic Test:     Passed           Ctr 2, Interrupted:    0
     Register Test:  Passed           Ctr 3, Incomplete:     0
     RAM Test:       Passed           Ctr 4, Not Acceptable: 0
     ROM Test:       Passed           Ctr 5, Relearned:      1
     DAC Test:       Passed           Ctr 6, Autosized:      0
     Screen Drivers: Passed           Ctr 7, TouchEvents:    0
     X AGC Level:    25:137           Ctr 9, S/N Ratio for X:45
     Y AGC Level:    20:175           Ctr 10,S/N Ratio for Y:45
IntelliTouch diagnostic data saved to disk in 20000920.SWV.
```

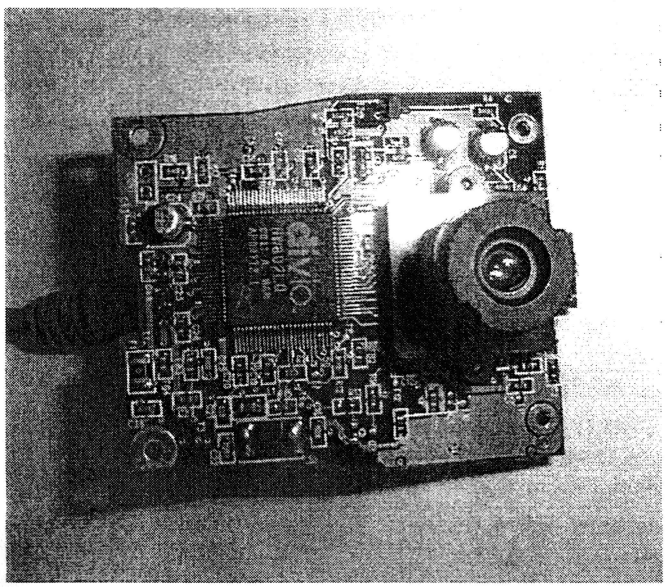
Monitor Minibezel:

The minibezel is field replaceable

A: Minibezel fixing nuts – remove to release minibezel
B: Monitor tube fixing screws – remove to replace tube
C: Monitor adjusting screws – release locknuts, then adjust using a hexagon key, retighten lock nuts.



3.4.7 Camera



USB Webcam (Non functioning under DOS)

Sensor	250K pixels color CCD
Pixels	640 x 480 (H x V) software enhanced
Focal Range	Manual, 1cm ~ infinity
Shutter Speed Range	1/10 - 1/14,500 of a second
Lens F/No.	2.0
Viewing Angle	60°
Interface	Full speed USB
Power	Supplied by PC through the USB port

Switch-on diagnosis:

Having been switched on, the unit performs a self-test. If no problems are discovered the unit is ready for playing.

However, should problems occur you will have to locate and correct the error by means of the following **TROUBLESHOOTING** list or the service technician of your general importer.

3.5 Troubleshooting list, frequent errors:

Screen is dark, fan not running	• Check Power supply • Check fuse in line filter (3.15 A)
Screen is dark, fan is running, Chassis LED is off	• Check that monitor is switched on (PCB switch under tube – Green LED should be lit) • Check Power supply connection to monitor • Check fuse on chassis PCB (3.15 A)
Screen is dark, Chassis LED is orange (no signal)	• Check VGA cable • Check VGA signal from computer box
Screen is dark, LED of hard disk frame is illuminated	• By turning the potentiometer (brightness) on the line transformer, check if the chassis is working (if OK → screen gets bright and lines become visible) • If this does not help either, replace the motherboard.
Screen OK, touchscreen not operating.	• Check the diagnostic LED on the controller board: • No LED activity: check controller power supply (5V dc) or replace controller. • Slow LED flashes + Continous when screen touched indicates touchscreen is ok, fault must be in serial cable or motherboard. • Continuous or fast flashing indicates sensor fault: run ELO diagnostic program.
Screen OK, touchscreen doesn't work at some points.	• Inspect the area for glass damage. (deep scratches only can effect performance) • Re-calibrate the touchscreen in the set-up-menu • Remove bezel and check seal is intact and that the sensors and or reflector pattern are not contaminated and that they are dry. • Run ELO diagnostic program. • Replace the monitor tube if necessary.
Touchscreen Error	• Check all connections of all TS-components and replace them if required. • Run ELO diagnostic program
The unit crashes at various points in the programme without obvious reasons.	• Replace the motherboard and monitor the unit (test main).
The unit stops at the yellow picture (funworld).	• Replace the TS Controller • If this does not help, replace the motherboard.
The unit always crashes at the same point (for instance with the same game)	• Software Update • Replace the hard disk
The unit slows down progressively during playing, possible even stopping.	• Replace hard disk • Replace motherboard
No sound	• Check all cable connections and check if the jack plug is inserted in the "speaker" socket. • Replace motherboard if required.
The unit does not register money insertion, but coins drop into the till	• Update your software to the current NSB number • Check the cable connection between coin control and motherboard.
The unit does not accept any money	• Check the cable connections between coin control and motherboard. • Replace the motherboard, coin check if required.
DISK BOOT FAILURE, INSERT SYSTEM DISK AND PRESS ENTER.	• Check whether the ribbon cable is correctly plugged into the motherboard and replacement frame. • Check the power supply to the hard disk. • Check the BIOS settings

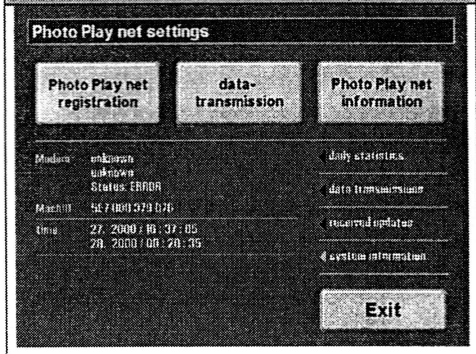
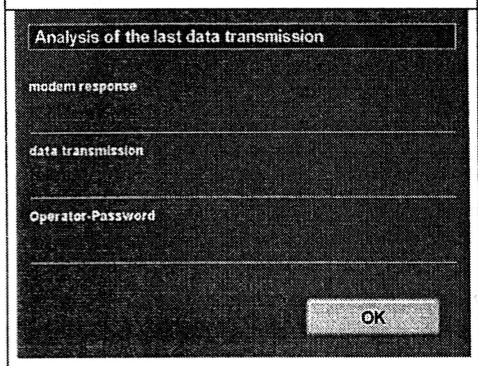
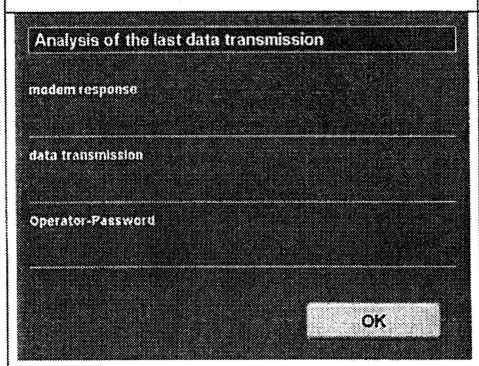
	• Remove hard disk and connect directly with the ribbon cable. If the error message fails to occur, exchange replacement frame, otherwise replace hard disk.
A CRITICAL ERROR OCCURRED !!! **MODULE: C:\EXE\MASTERS.EXE** **DATE/TIME: 31.01.2000 17:07** **ERROR DESCRIPTION** **NO TEXT FOUND FOR >MSTRNGL< IN RESOURCE ..... \MASTERS\RESOURCE\TEXT.I** PLEASE WRITE DOWN MODULE AND ERROR DESCRIPTION AND **REPORT THIS ERROR TO A PHOTO PLAY CUSTOMER SERVICE.** **PRESS AND KEY TO TERMINATE PROGRAM.....**	Replace hard disk or C-Dongle if required.

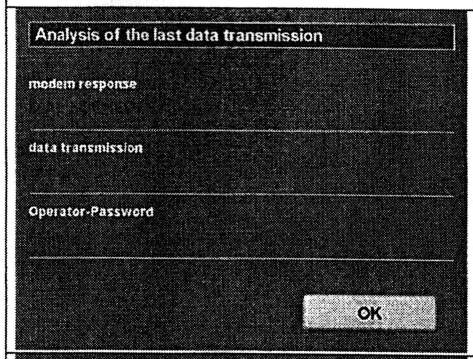
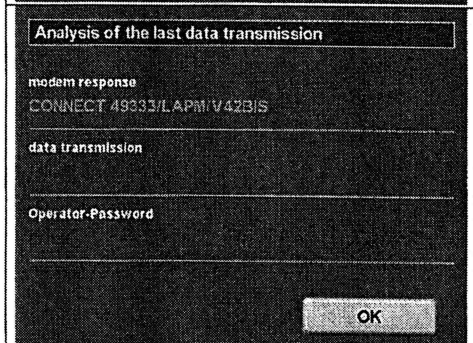
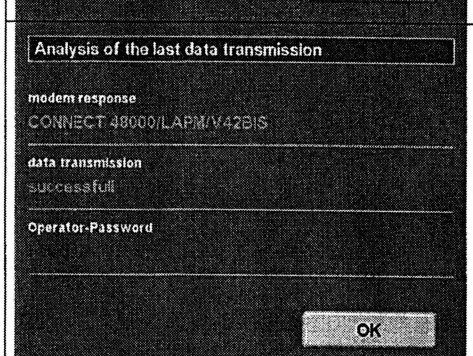
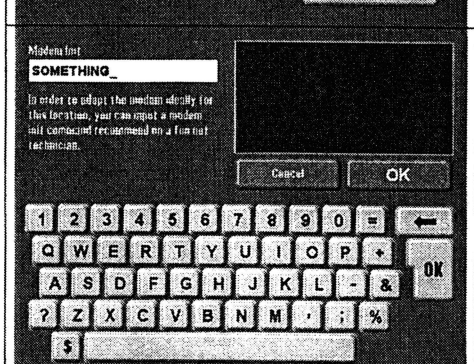
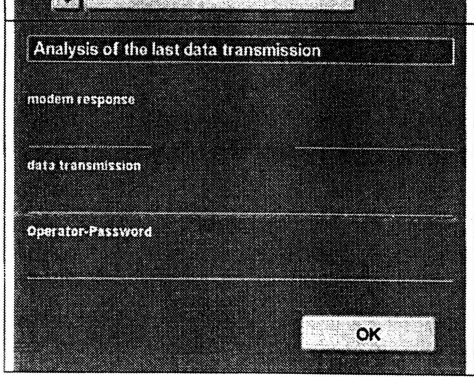
Any commercial SVGA monitor can be connected to the VGA port (check to determine if monitor and motherboard are OK). The touchscreen function is only available on the Photo Play iTouch Monitor.

3.5.1 Troubleshooting banknote reader NV4

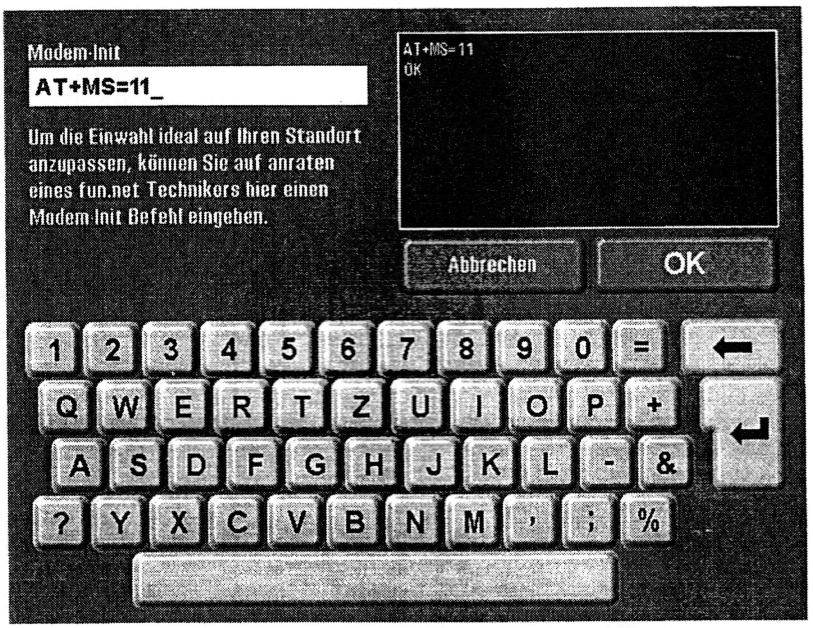
Fault Description	Search Help	Fault Removal
The banknote reader accepts no banknotes.	Is the front plate illuminated? Is the internal connector lead plugged in?	Check for electric power on the equipment. Check the supply leads (Voltage surges?, Power supply unit correctly parameterized?)
The banknote reader runs slowly or in fits and starts.	Check for any structural damage. Check the insert and pass-through spaces for foreign bodies. Have the conveyor rollers been contaminated by oil or grease?	 Carry out all round cleaning routines. (Voltage surges?, Power supply unit correctly parameterized?)
Banknotes are accepted but no credit signal is given.	Is the wiper switch at the TEACH position? Banknote acceptance: is the wiper switch set to the RUN position?	Select the appropriate channel and re-program. (Voltage surges?, Power supply unit correctly parameterized?)
The banknote reader can be programmed but does not accept banknotes.	Check that the +VCOM is connected up to the interface. Are the block lines switch released? Is the intermediate cashier/till connection switched off?	Check the plug connection to the automat. Check the block lines ("LOW" = acceptance). Check the interface.
Otherwise correct banknotes are rejected.	Have the appropriate obverse and reverse sides or the directions been correctly programmed? Is the band width too narrow?	Re-program. Re-select the band width from HIGH to STANDARD or LOW. (Voltage surges?, Power supply unit correctly parameterized?)
The banknote reader mistakes the credits of those banknotes inserted.		In cases of doubt, erase the relative channels and re-program. Ensure, that the banknotes are inserted straight and centered.
The banknote reader can only be programmed with difficulty.	Check, that the banknotes are properly sorted. Check for damaged banknotes.	Sort the banknotes before programming; if necessary, replace with banknotes in a better condition. (Voltage surges?, Power supply unit correctly parameterized?)

3.5.2 Troubleshooting Photo Play NET

Problem:	Solution:
	The modem was not found! • Check if the modem is ready: 1. is the status light illuminated(at Barry and Smart the machine must be opened)? ▯The modem is off or there is a fault with the voltage supply. 2. Is the serial plug fixed on the modem? ▯The computer gets no connection with the modem. • Check the Bios settings 1. Check the adjustments of the Mainboards: ▯(see Bios settings)
	Response: NO DIALTONE This message means, that there is no dial tone/ outside line and it is only valid, if no number for an outside line is used! • Check the plug connections 1. Is the telephone cable plugged in the *Line* entry of the modem (the plug must be engaged)? 2. Is the telephone cable plugged in the telephone socket. Here must be noted the country specific standards. • Check the telephone cables / modem cables 1. Measure the individual cables with a through tester. Here must be noted the country specific coverage of the cable. 2. Control Sie if the plugs are fixed on the end of the cable. • Test all machines (telephone, fax,...) which are connected with the telephone plug. 1. Check, if you get a dial tone from your telephone or fax. ▯Probably the telephone cable has been plugged in wrong in the telephone plug.
	Response: NO CARRIER There is no connection, or the carrier is lost. • Start the data transfer again 1. Start the data transfer again, if you should get the same Error massage, wait 10 to15 minutes until you start the next data transfer. ▯Probably there is a problem with the provider. • Check the dialling number 1. Go into *Photo Play net registration* and control under the point *How the machine dials in?* the displayed dialling number. If you are not sure, that the dialled number is right, simply dial with the telephone (which is plugged in the same telephone socket as the Photo Play) the telephone number and see to it if you hear an other modem (whistle and squeak) on the other line.

	• Check the telephone line 1. see remedy NO DIALTONE ▯you have to note this, if no *number for an outside line* is used!
	Response : DIAL LOCKED The modem has activated a dial block. This happens after approx. 8 consecutively faulty connection trials within a certain period (country specific). 1. Switch of the modem and start the transfer again after 120 minutes, try to solve the problem with the Error message. If the same Error message is displayed again, switch the modem off and on.
	Response: CONNECT xxxxx Data transfer: not successful • The modem has interrupted the connection to the provider 1. Start the data transmission again 2. The problem happens again and again ▯Try to decrease the transmission speed of the modem with the help of a MODEM INIT STRING (see table below)
	Response: Operator Password failed • Check the data of the operator 1. Check Operator licence code and Operator password 2. Make sure that a data transmission took place. Otherwise the server can not check the password and the licence codes and reply a failed message.
	Modem Init String responses no OK • Check the Modem Init String 1. See in the modem command list if the command is for your modem. 2. The command is not acceptable or not filled into the bar correctly
	Response: BUSY • Start the data transmission again after a few minutes • If the Error message appaers again and again you should check the dial in number 1. Check if it is neccessary to use a number for an outside line. 2. Check if you have choosen the correct dial in number for your region.

Command input:
All commands transferred to the modem must commence with the ASCII characters AT or at (not permitted: At or aT) Several command can be linked up suffixing the second Init command to the first Init command without AT or at (for instance ATS8=1 and ATL0 becomes ATS8=1L0)



If a MODEM INIT STRING is filled into the bar, it is usefully to press the TEST-BUTTON (ENTER key on the right side). If the program replys with OK the command is acceptable for this modem. If the program doesn't reply with OK, the MODEM INIT STRING is filled in not correctly or not acceptable for this modem.

3.5.3 AT command modem init strings

Nr.		Elsa ML 33,6 TQV	Elsa ML 56k A	Elsa ML 56k pro/ i	Elsa Tango 1000 & ML ISDN	Diamond SE 56 e pro	USR Sportster Voice 56k	Speedcom (Rockwell chipset)
1	ATS8=n „delay time after number for external line "	X	X	X	X	X	X	
	n is the delay factor in seconds. valid values: 0..8 Sekunden standard value: 5 Sekunden *							
2	& „flash key"	X	X					
	flash key (only for tone dialling), just by old telephone centres instead of „0". This must be inserted into *number for external line*.							
3	AT&F „load standard configuration"	X	X	X	X	X	X	
	The modem loads the factory defaults.							
4	ATIn „outputs product information"	X	X	X	X	X	X	
	Outputs product informations (f.e.: product name, firmware version,...). valid values : 1..10							
5	ATLn „volume control"	X	X	X		X	X	
	This command is to set the volume. ATL0 : low loudness level ATL1 : low loudness level ATL2 : medium loudness level * ATL3 : high loudness level							
6	ATMn „loudspeaker control"	X	X	X		X	X	
	This command controls the speaker activity. ATM0 : speaker always OFF ATM1 : speaker on by the connection process * ATM2 : speaker always ON							
7	ATXn „Dialing Type and CONNECT Result Codes"	X	X	X	X	X	X	
	This command sets the dialling type. With ATX2 or ATX4 the modem waits for a dial tone before it starts to dial. With ATX0, ATX1 and ATX3 the modem doesn't wait for a dial tone, it is blind dialling. Additional this command sets if the modem recognice a busy signal and returns the message BUSY or if it doesn't recognise the busy signal, returns the message NO CARRIER and stops the trial. ATX0 : ignore dial tone / busy signal ATX1 : ignore dial tone / busy signal ATX2 : wait for dialtone / ignore busy signal ATX3 : ignore dial tone / note busy signal ATX4 : wait for dial tone / note busy signal * ATTENTION: If a number for external line is used, the program will automatically add the command ATX3!							
8	ATS6=n „delay time before blind dialling"	X	X	X		X		

	This command sets the time before it starts to dial with blind dialling (see ATX0, ATX1 and ATX3). valid values : 3..6 seconds standard value : 3 seconds *							
9	ATS7=n „waiting for carrier"	X	X	X		X		
	This command sets the time how long the calling modem waits for the carrier. If the modem doesn't get a carrier in this time period it hangs up. valid values : 1..255 (1/10 second) standard value : 50 (seconds) *							
10	ATS10=n „delay from lost carrier"	X	X	X		X		
	The time your modem waits for a carrier to return before disconnecting. A long enough time allows the remote modem's signal to momentarily disappear without making your modem disconnect. valid value: 1..255 (1 second) standard value : 14 (1,4 second) *							
11	ATS64=n „sending level"	X	X	X				
	This command sets the sending level of the modem. valid values : 10..15 (-dB) standard value : 10 (-dB) *							
12	AT+GCI=04&F „ change country setting to activate puls dialling"			X				
	With this command the actual country setting of the modem will be changed to the german modem setting. By all the outher country settings (France, Italy,...) the pulse dialling is deactivated because of the local laws. If the modem settings are setted to german, the modem allows pulse dialling.							
13	AT&Pn "activate pulse dialling for US Robotics"						X	
	This command sets pulse (rotary) dialling for US Robotics modems. n = 0 pulse dialling disabled * n = 1 Denmark, Germany, Austria, Finland, Switzerland, Netherlands, Italy, South Africa, Czech Republic n = 2 France, UK, Belgium, Ireland, Spain, Portugal, Australia, Asia, Korea n = 3 Norway n = 4 New Zealand n = 5 Japan n = 6 Sweden							
14	AT+MS=Vn „select modulation"			X				
	This command sets the modulation type of the modem. valid values for Vn: ..V90 * ..V34 ..V32B ..V32 The transmission speed will be controlled by the modem. It depends on the line quality.							
15	AT+MS=Vn,<automode>,<min_(tx_)rate>,<max_(tx_)rate>,<min_rx_rate>,<max_rx_rate> „select modulation (extendet)"			X				

	automode .. this parameter is an optional numeric value that enables or disables automatic modulation. *min_(tx_)rate,max_(tx_)rate,min_rx_rate,max_rx_rate* .. is an optional number that specifies the highest/lowest rate at which the modem may establish a connection. A value higher than "0" sets the maximum bit rate in bit/s what the modem tries to connect. valid values for automode: 0 .. automode-function OFF (fixed data speed, *min_rx_rate* and *min_(tx_)rate* is not neccessary) 1 .. automode-function ON * valid values for *min_(tx_)rate,max_(tx_)rate,min_rx_rate,max_rx_rate:* .. 0 (automatic dataspeed) .. 300 .. 4800 .. 9600 .. 14400 (only V34, V32bis) .. 19200 (only V34) .. 24000 (only V34) .. 28800 (only V34) .. 33600 (only V34) Example: If the modem has to connect with modulation type V34 by a data speed of 28800 bit/s and the automode function has to be OFF, than the following command is necessary: AT+MS=V34,0,28800,28800							
16	AT%G1%Bn	X	X					
	This command is used to fix the dataspeed of the modem to a fixed value. valid value for n: .. 4800 .. 9600 .. 14400 .. 19200 .. 24000 .. 28800 .. 33600							
17	AT+MS=n „select modulation"					X		
	This command setts the modulation type of the modem. valid values for n ..12 (V90) ..11 (V34) ..10 (V32bis) ..9 (V32) The transmission speed will be controlled by the modem. It depends on the line quality. example: If the modem has to make a connection with the V34 protocol. AT+MS=11							
18	AT+MS=n,<automode>,<min_Rx_rate>,<max_Rx_rate>,<max_Tx_rate> „select modulation (extendet)"					X		

	automode .. this parameter is an optional numeric value that enables or disables automatic modulation. *max_Tx_rate, min_Rx_rate, max_Rx_rate* ... is an optional number that specifies the highest/lowest rate at which the modem may establish a connection. valid values for automode: 0 .. automode-function OFF (fixed data speed, *min_Rx_rate* is not neccessary) 1 .. automode-function ON * valid values for: *<min_Rx_rate>,<max_Rx_rate >,<max_Tx_rate>:* .. 300 .. 4800 .. 9600 .. 14400 (only V34, V32bis) .. 19200 (only V34) .. 24000 (only V34) .. 28800 (only V34) .. 33600 (only V34) Example I: If the modem has to connect with modulation type V34 by a data speed of 28800 bit/s and the automode function has to be OFF, than the following command is necessary: AT+MS=11,0,28800,28800 Example II: If the modem has to connect with modulation type V34 by a data speed between 300 and 28800 bit/s and the automode function has to be ON, than the following command is necessary: AT+MS=11,1,300,28800							
19	AT$IBP=x "operation mode of B-channel"				X			
	This command sets the operation mode of the ISDN adapter. If this command is not used, it tries to connect with ISDN protocol X75. valid values for x: X75 V120 HDLC HDLCP							
20	AT$ICLI=0,"MSN" „setting the outgoing Multible Subscriber Number (MSN)"				X			
	This command is only for DSS1-protocol (Euro-ISDN). This command sets the Multible Subsrciber Number (MSN) which is sent by outgoing calls. Especially by internal Telefone centres it is often neccessary to set it. The number may contain of 20 digits maximum. Example: The ISDN adapter must have the MSN 231. AT$ICLI=0,"1234"							

3.5.4 General modem responses:

response:	meaning:
OK	a command line has been executed successfully
ERROR	Sent during an attempt to execute a command line if any of the following conditions occur: 1) the command line contains a syntax error. 2) the modem cannot execute a command contained in the command line, i.e., the command doesn't exist or is not supported.
NO CARRIER	Is sent when the modem auto-disconnects due to loss of carrier.
NO DIALTONE	For X2 and X4, the modem has been instructed to wait for dial tone during dialling but none is received.
BUSY	For X3 and X4, if busy tone detection is enforced, the busy (engaged) signal is detected on the line when the modem is attempting to originate a call
CONNECT 48000	The modem has connected to the line, the speed is 48000 bit/s.
NO ANSWER	The called modem doesn't answer
DELAYED	For X4, sent when a call fails to connect and the number dialled is considered "delayed" due to country blacklisting requirements.
SYS_CRASH	The machine hang up during the data transmission
PPP_ABORT	Problem during the dial in process, usually depends of the ISP

3.5.5 Modem glossary

Asynchronous Datatransmission
Data transmission one character at a time, with intervals of varying lengths between transmittals; start and stop bits at the beginning and end of each character control the transmission. Compare to synchronous transmission.
AT-Command
With the help of AT commands the computer can communicate with the Modems (AT command set).
B-Channel
In ISDN, a full-duplex, 64 Kbps channel for transmitting audio, video, and data between terminals (transfer channel).
Basis Rate Interface
The Basis Rate Interface is a normal ISDN connection. Every Basis Rate Interface has two Use Channels and a Control Channel.
BIT
binary digi The units--0 or 1--used in the binary numbering system. a Bit is the smallest binary basis mode with which the conditions 0 = off and 1 = on can be shown.
Bit/Sec
Measurement unit for transmission speed over data communications lines.
Client
A distributed system model of computing that brings computing power to the desktop, where users access resources from servers.
COM-Port
Serial port. Modems get connected on the serial COM-Port of the computer.
D-channel
Data channel used in an ISDN interface to carry control signals and customer call data. In PRI, the D channel runs at 64,000 bits per second. The D channel provides the signaling information for each of the 23 voice channels (B channels).
Long-Distance data transmission
Data transmission between two computer. The computer are connected via telephone a line.
DECT

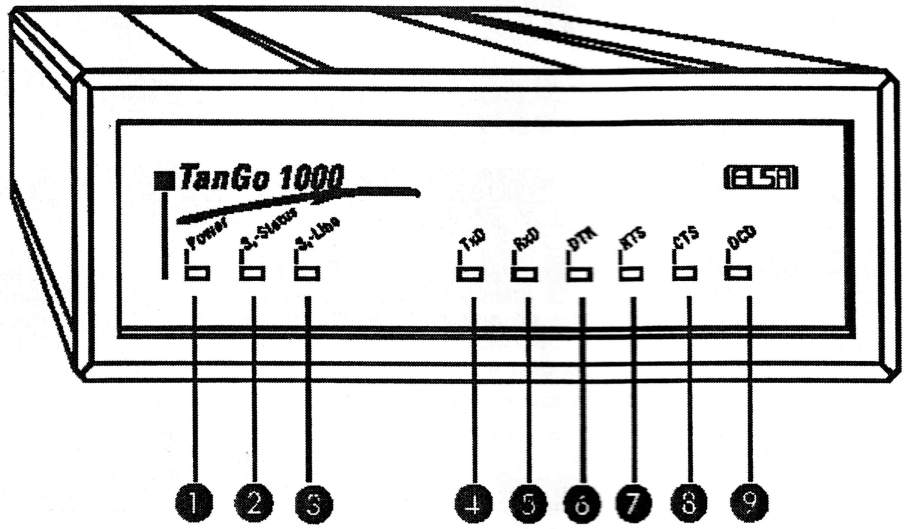
abbreviation for "Digital European Cordless Telephone". International Standard for wireless telecommunication.
Digital Switching Centre
The dialling process take place digitally instead of a mechanical dialling system.
Download
The receiving of data from a computer to another computer via telephone line. The opposite is Upload.
DSS1-Protocoll
Abbreviation for "Digital Subscriber Signalling System No. 1". it is the D-cannel-Protocoll of the Euro-ISDN-connection.
Duplex
A method for the datatransmission, data are sent in both directions. See also half Duplex and Simplex.
EAZ
Abbreviation for "Endgeräteauswahlziffer". Also called terminal selection digit. It serves to distinguish various terminal units attached to the same Basis Rate Interface when using the 1TR6 protocol. This digit is appended to the dial number by the caller.
Email
Short for electronic mail; the transmission of written messages over communications networks.
Terminal
A terminal is a device like a modem, fax or a normal telephone.
Euro-ISDN
Since 1993 European standard for ISDN. At year 2000 it will remove the national ISDN standards.
Faxmodem
A Modem which is able the send and receive faxes.
Firmware
The internal software of a terminal (modem, fax). Nowadays it is very easy the remove the firmware of a terminal to a newer one.
Flash
A short interupt of a connection. A Flash (or R-Key or Softkey) is used in internal telephone centres for different processes.
FTP
The Internet application and protocol used to send complete files over TCP/IP services.
Half duplex
Both stations are able to transmit and receive. But not at the same time. One station is sending and the other one is receiving this time. See also Duplex and Simplex.
HDLC
Abbreviation for "High level Data Link Control", the data consists of USE Information and Control Information.
Hybrid modem
ISDN Modem which can communicate to analogue and digital networks.
I/O-Address
Memory address in a computer system. Ports, sound cards, modems,... have a different memory address for inputs and outputs.
Pulse Dialling
Dialling Methode. There are sent small interrupts sent to the switching centre.
Initialisation String
AT Command
Internet
World wide biggest computer network, it consists of different services. For example: FTP, Gopher, Telnet and World Wide Web.
Interrupt
Neccessary for different periphery. With the help of an interrupt the processor interrupts its work and communicate with the periphery. Via the interrupt channel the processor communicate with the periphery.
ISA
A bus system for the copmuter, it is on the mainboard and is synchron 16 bit data bus.
ISDN
Integrated Services Digital Network The recommendation published by CCITT for private or public digital telephone networks where binary data, such as graphics and digitized voice and data transmission, pass over the same digital network that carries most telephone transmissions today; provides 2 x 64 Kbps (2B + D) bi-directional data capacity.

ISDN-Karte
Plug-in-card for computers. Enables the data transfer between two different ISDN networks.
ITU
Abbreviation for "International Telecommunications Union".
Jumper
Are small connections between two pins. Jumpers are on graphic cards, sound cards, ... and are for the hardware configurations.
LAN
Abbreviation for "Local Area Network". Local computer network which has the sice of a room a house or maximum a company area.
Mailbox
Electronic mailbox, which sent and receive electrical mails.
Tone Dialling
Dialling methode. Short tone sequences are sent to the switching centres.
Modem
This mechanism connects a computer to a phone line so information can be sent from one computer to another, or the user can access an online service or the Internet. In view of the popularity of the Internet, a modem is now considered basic equipment and comes on practically all new computers. Most modems come with fax capabilities.
Multiple Machine Connection
A connection on which more than one terminal can use the S0-Bus.
MSN
Abbreviation for "Multiple Subscriber Number". Defines a Multiple call number of a ISDN-Basis Rate Interface.
NTBA
Abbreviation for "Network Termination for Basic Access". It is the net terminal for an ISDN Basis Rate Interface
Using channel
An other definition of the B-cannel.
Offline
There is no connection between switching centre and the terminal you are using. The opposite is Online.
Online
There is a connection between switching centre and the terminal you are using. There is a data transmission. The opposite is Offline.
Port
A port is used for the communication to an external device.
S0-Bus
Bus system for ISDN connections. On one S0-Bus it is possible to connect 8 terminals (ISDN modems).
S0-Line
International standard Line of the ISDN Basis Rate Interface (NTBA).
Interface
Connection between hardware and software. For example a serial port for the modem.
Simplex
The data transfer just take place in one direction. Thus just from the transmitter to the receiver or turned around.
Synchron
Form of usually high-speed data communication that uses synchronization bytes instead of start or stop bits to tell the receiving device about the coming transmission. More complex than asynchronous.
TCP/IP
Abbreviation for "Transmission Control Protocol/Internet Protocol", and is a protocol for the internet. TCP takes the feed of the data, IP cares about the address of the receiver.
Transmission speed
Specification for the data speed of a data transmission (Bit/s).
Upload
The computer is sending data into a network. The opposite is Download.
User
The User of an online serve.

V34
A ITU recommendation for the datatransmission into a analogue network with modems. Maximum data speed is 336000 bit/sec.
Dialling Process
Transmission of the dial information from a terminal to the switching centre of the telecom centre. Possible methods for analogue terminals are pulse dialling and tone dialling. Digital terminals like ISDN has a digital dialling methode.
Western Plug (AMP-Data connector)
Definition of a plug with 4 or 6 pin connection for analogue systems and 8 pin connection for ISDN terminals.
World Wide Web
Internet-Service with multimedia characteristic, Word Wide Web is the most popular internet-service in the internet.
X-75
International standard of a connection protocol for datatransmission into the ISDN network.

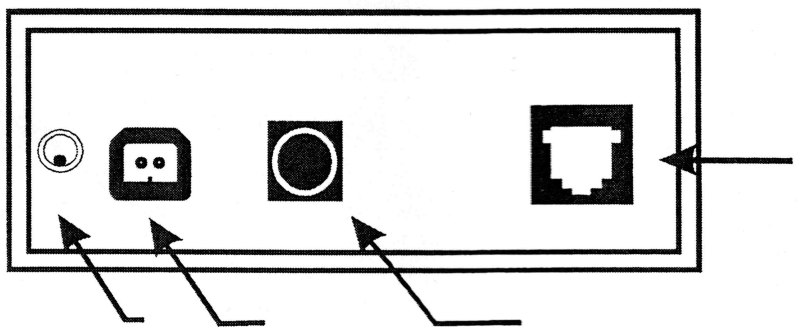
3.5.6 ELSA TANGO 1000 (ISDN)

The light emitting diodes (LEDs) indicate the status of the interface lines and the status of the modem.



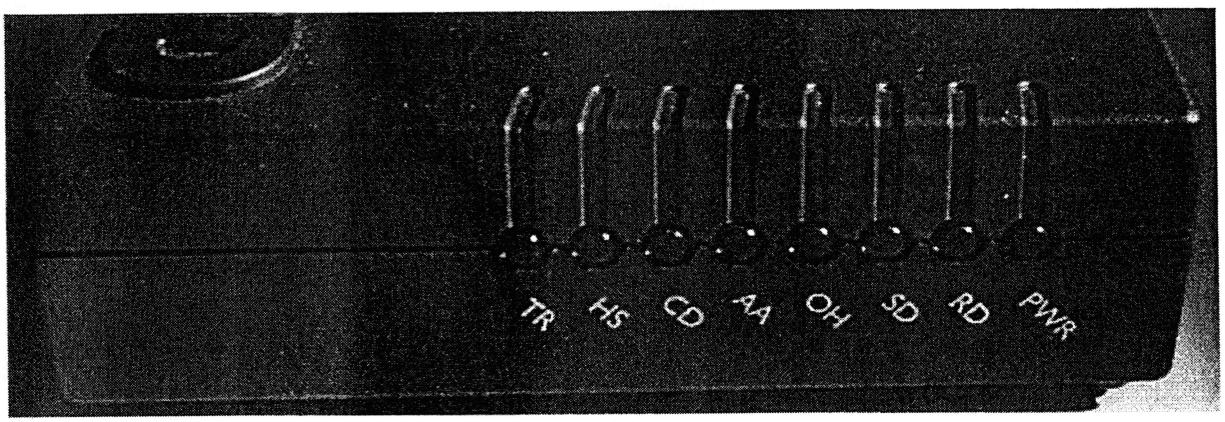
Item	Display	Interpretation
1	Power	Adapter switched on
2	S0 Status	S0-bus enabled
3	S0 Line	Adapter connected to line
4	TxD	Data from Photo Play to ISDN-Adapter
5	RxD	Data from ISDN-Adapter to Photo Play
6	DTR	Computer operational
7	RTS	Switch on sending unit
8	CTS	ISDN-adapter ready to send
9	DCD	Connection made

Rear view:



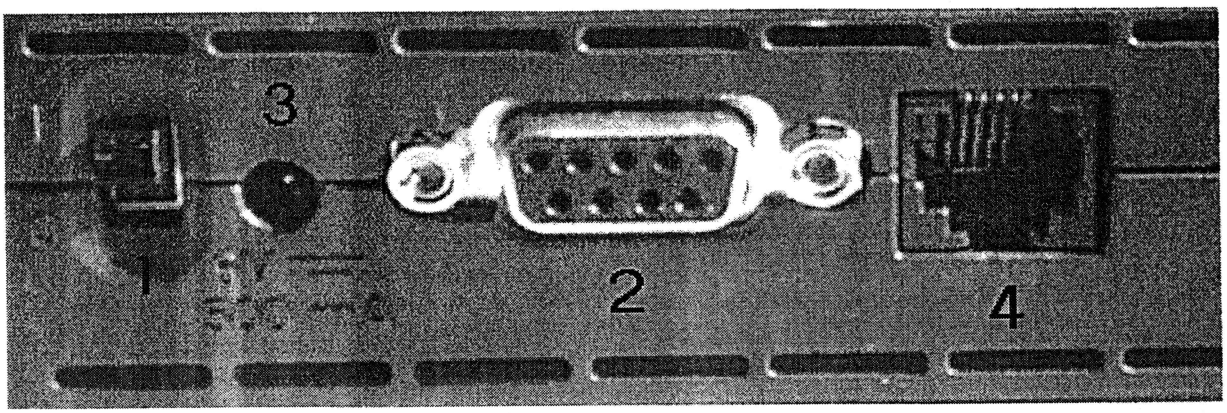
Pos	Interpretation
1	ON/OFF-Switch
2	Power supply
3	Serial cable to computerbox
4	Telephone plug

3.5.7 Diamond Supra Express 56e pro



Anzeige	Bedeutung	
TR	Terminal Ready	Terminal software is ready
HS	High Speed	Connection between (32.000 bis 56.000 bps)
CD	Carrier Detect	Modem is connected with an other modem
AA	Auto Answer	Modem is ready for auto answer
OH	Off Hook	Modem is connected to the line
SD	Send Data	Data from PP the modem
RD	Receive Data	Data from modem to Photo Play
PWR	Power	The modem is ready

Rear View:



Pos	Interpretation
1	ON/OFF-Switch
2	Serial cable to computerbox
3	Power supply
4	Telephone plug

3.6 Part list Photo Play SPIRIT 2.1

Position	BG Computerbox	Assembly Computer Box	
0	[Metall]	Metal	
1	Blechgehäuse Computerbox	Computer Box	7600002
2	Deckel für Computerbox	Computer Box Lid	7600003
3	EMV Schutzblech für Wechselrahmen	HDD Cover Plate	7600072
4	Slotabdeckblech	Slot Cover Plate	7200361
5	[Elektronik]	Electronics	
6	Motherboard 6WEV inkl. Kabelsatz	Motherboard 6WEV with cable set	7201122
7	32 MB SDRAM	32 MB SDRAM	7201113
8	CPU	CPU	7201114
9	CPU Lüfter	CPU fan	7201119
10	HDD 10,2GB	HDD 10,2GB	7201127
11	Schaltnetzteil 200 W mit EMI Filter (UL)	PSU 200 W with Filter (UL)	7200276
12	Parallel C- Dongle <Finnland>	Parallel Dongle	7200157
13	Dongle f. Multifunktionskarte V98/1	Dongle for multifunction card V98/1	7200737
14	Wechselrahmen, Neu für Klappgriffe	Exchangeable HDD, New Frame	7201139
15	Wechselrahmen Einschub, Klappgriffe	Exchangeable HDD, insert with folding handle	7201140
16	Modem Diamond	Modem	7500060
17	LANkarte	LAN Card	7600066
18	[Kleinteile]	Misc.	
19	Abstandhalter	Spacer	7600063
20	Driller selbstklebend	Cable tie, self-adhesive	7006586
21	Kabelbinder klein	Cable tie, small	7001003
22	EMV Kontakt neu	EMC Contact, new	7200206
23	gefu. Linsenschrauben M3x6, verzinkt	Self tapping metal screw M3x6, Zinc-coated	7200373
24	Linsenschraube M4x8 m. Kreuzschlitz	Cross head screw M4x6	new
25	Monitormodul von Elo	Monitormodule, Elo	
26	BG-Monitor ELO i-Touch	Assembly, Monitor ELO i-Touch	7600049
27	BG Holzgehäuse	Assembly, Carcass	
28	[Holz]	Wood	
29	BG Gehäuse komplett (inkl. Scharniere)	Assembly, Housing, Wood	7600041
30	Rollenhalterung komplett	Rollers, complete	7200633
31	Grundplatte Höhenverstellung	Levelling screws, baseplate	7200728
32	Höhenverstellschrauben	Levelling screws	7200730
33	[Metall]	Metal	
34	Befestigungsplatte für Schloßverriegelung	Fixing plate for lock	7600032
35	Klappenfeststeller	Upper Front Panel Stay	7600022
36	Monitorfeststeller	Monitor Stay	7600071
37	Linsenschraube M5x16 m. Kreuzschlitz	Cross head screw M5x16	new
38	Beilagscheibe 5,3 Verzinkt	Washer, Zinc Coated	new
39	Distanz	Spacer	new
40	Kassenauszug (kein Ausschnitt)	Cashbox (no Cutout)	7600029
41	Linsenschraube M6x25 m. Kreuzschlitz	Cross head screw M6x25	new
42	Linsenschraube M6x30 m.	Cross head screw M6x30	new

	Kreuzschlitz		
43	Quergewindebolzen M6 x 12.5	Threaded insert M6 x 12.5	new
44	Hebelschloß incl. Muttern und Sicherungsscheibe +2 Schlüssel	Lock incl. Nuts and Securing washer +2 keys	7200323
45	Hebel für Schloß	Camplate for Lock	7200325
46	Halterung für Netzfilter	Mounting Plate for Mains Filter	7201087
47	Halter für Münzprüfer	Coin Examiner Bracket	7600020
48	[Elektronik]	Electonics	
49	Netzentstörfilter	Mains Filter	7201100
50	Münzprüfer	Coin Examiner	7600715
51	Lüfter	Fan	7200674
52	Linsenschraube M4x35 m. Kreuzschlitz	Cross head screw M4x35	new
53	Selbstsichurungsmutter M4	Self Locking Nut M4	7200330
54	Vorschaltgerät mit Fassung	Lamp Ballaset with Holder	7200217
55	Leuchtstofflampe	Compact Flourescent Lamp	7200218
56	Distanz	Spacer	7200342
57	[Kleinteile]	Misc.	
58	Münzschlauch	Coin Hose	7600045
59	Lüftergitter	Fan Cover	7200673
60	Driller m. Blindlochbef. Groß	Cable tie, Hole fixing, Large	7200035
61	Driller m. Blindlochbef. Klein	Cable tie, Hole fixing, Small	7200023
62	BG Front Panel oben	Assembly Upper Front Panel	
63	[Kunststoff]	Plastics	
64	Front Panel Oben	Upper Front Panel	7600039
65	Kunststoff Seitenteil rechts u. links	Side Pieces, Right and Left	7600035
66	Kunststoff Monitorrahmen	Monitor Frame	7600037
67	Acryllogo ungedruckt (Tiefziehteil)	Logo, Vacuum Formed, Not Printed	7600033
68	Logo Aufkleber	Logo sticker	7600076
69	Acryllogo 'Milchglas'	Light Diffuser	new
70	Branding "Net Generation"	Branding "Net Generation"	7600077
71	Münzeinwurfprofil	Coin Entry Profile	7600043
72	Rückgabeknopf Kunststoff inkl. Ring	Reject Button, incl. Fixing Ring	7200885
73	[Kleinteile]		
74	Dichtungsband f. Monitorblende Astorflex 4x6 mm	Sealing Foam Astorflex 4x6 mm	7200000
75	Rückgabeknopf Feder	Reject Button, Spring	7600075
76	Imbus Schraube M8x100	Bolt, M8x100	7600044
77	[Metall]	Metal	
78	Lümmelboard Blech	Palm Rest Plate	7600031
79	Stützwinkel links	Angle Bracket, Left	7600067
80	Stützwinkel rechts	Angle Bracket, Right	7600068
81	Hebelschloß DR625.008(STS kurz)	Lock, DR625.008, (STS Short)	7001901
82	Haken für Schloß	Camplate for Short Lock	7200326
83	Distanzstück für Schloß	Spacer for Short Lock	7600064
84	[Elektronik]	Electronics	
85	Lautsprecher (Mitteltöner)	Loudspeaker (Wide Range)	7600074
86	USB Video Camera	USB Video Camera	7600055
87	BG Front Panel unten	Assembly Lower Front Panel	
88	[Kunststoff]	Plastic	
89	Front Panel Unten inkl. Gummi	Lower Front Panel incl. Mat	7600040
90	Münzrückgabe mit Klappe	Coin Reject incl. Flap	7600052
91	Befestigungswinkel links	Fixing Bracket, Left	7600069
92	Befestigungswinkel rechts	Fixing Bracket, Right	7600070

93	Kabel (Kabelbaum)	Cable (Loom)	
94	Kabelbaum für Netzversorgung	Mains Cable Loom	7600082
95	Zählwerk und BH-Taster Kabel	Counter, Book-keepin Button and Cable	7600080
96	Lautsprecherkabel	Loudspeaker Cable	7600079
97	Lüfterkabel	Fan Cable	7600085
98	Erdungskabel Netzfilter	Earthing cable, Mains filter	7200157
99	Erdungskabel Lümmelbord	Earthing Cable, Palm Rest	7600083
100	Erdungskabel Kassenauszug	Earthing Cable, Cashbox	7600086
101	Paralleles CC Kabel	Parallel CC Coin acceptor cable	7200105
102	USB Kabel (Kamera)	USB Cable, Camera	7600073
103	Netzanschlußkabel <Finnland>	Mains Cable, Finnland	7001307
104	Modemkabel 20m <Finnland>	Modem Cable 20m <Finnland>	7500069-SP/GR
105	Finnland Adapter	Finnland Adapter	7500080
106	Y-Kabel mit Kaltgerätestecker	Y-Cable with IEC plug	7500016
107	Diverse Teile	Miscellaneous	
108	PE Flachsack, Transparent	PE bag, Transparent	7200741
109	Verpackung für PP-NG	Transport Carton for PP-NG	7600048
110	Fächerscheibe M3	Washer M3	7200377
111	gefu. Linsenschrauben M3x6, verzinkt	Self Tapping Metal Screw, M3x6,zinc coated	7200373
112	Rändelschraube M4	Thumb Screw, M4	7200376
113	Gewebeband Tesa 4651 (x2.3m)	Fabric Tape,Tesa 4651 (x2.3m)	7200955
114	Div. Aufkleber u. Beschreibungen	Printed Articles	
115	Klebeetikette Buchhaltung <Finnland>	Sticker, Book-keeping <Finland>	7200413
116	Aufkleber Warnschilder<Finnland>	Sticker, Warning <Finland>	7200624
117	Länderkleber Dongle<Finnland>	Sticker, Dongle Country Flag <Finnland>	7200987-Finn
118	Touchscreen Aufkleber<Finnland>	Sticker, Touchscreen <Finland>	7200152
119	Währungsaufkleber <Finnland>	Sticker, Coins accepted <Finland>	new
120	Gerätekleber/Update 2000	Sticker, Update 2000	7700084
121	Garantieaufkleber	Sticker, Guarantee	7200141
122	Lizenzbroschüre Update2000	Licence Broschure, Update2000	7700087
123	Installationsanl. Fun.net-Kit Aktivierungsanl. PP-Net	Installation Guide fun.net-Kit, Activation Guide PP-Net	7500103
124	Beschreibung <Englisch>	Manual <English>	new

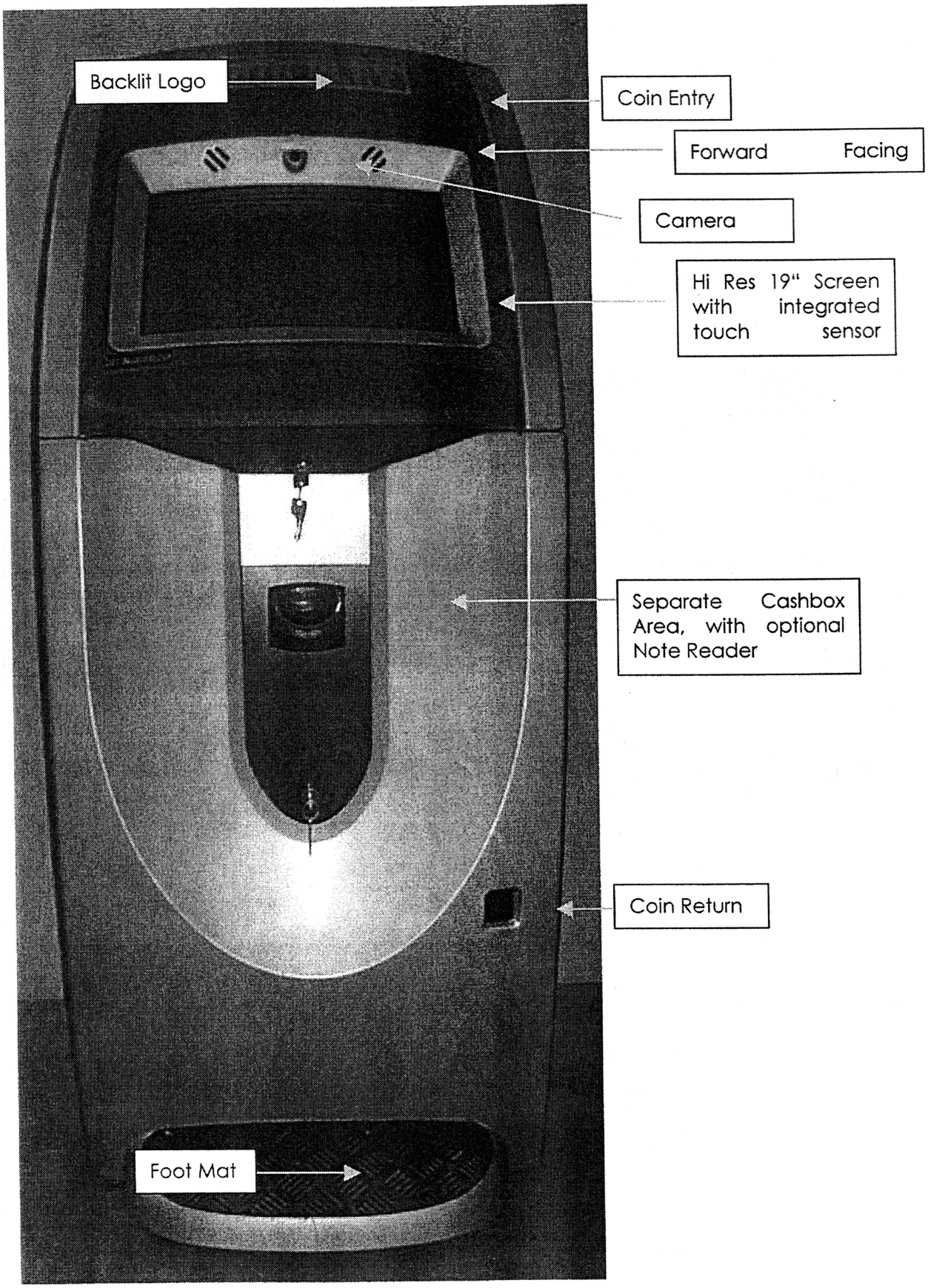
3.6.1 Options

Pos.	Article no.	FW-Order-no.	Description
	Subject to change		Corner element kit (anthracite grey)120°
	Subject to change		Corner element kit (anthracite grey) 90°
	Subject to change		Corner element kit (anthracite grey) 60°
	Subject to change		Corner element kit (anthracite grey) 45°
	Subject to change		Side table (anthracite grey)
	Subject to change		Linking table kit (anthracite grey)
	Subject to change		Wall board (anthracite grey)
	Subject to change		LAN-PCI card
	Subject to change		LAN-cable standard (5m) incl. plugs
	Subject to change		Link-Kit per Photo Play NG (1 PCI card, 1 cable)
	Subject to change		Start-Kit for 2 Photo Play (2 PCI cards, 1 cable)

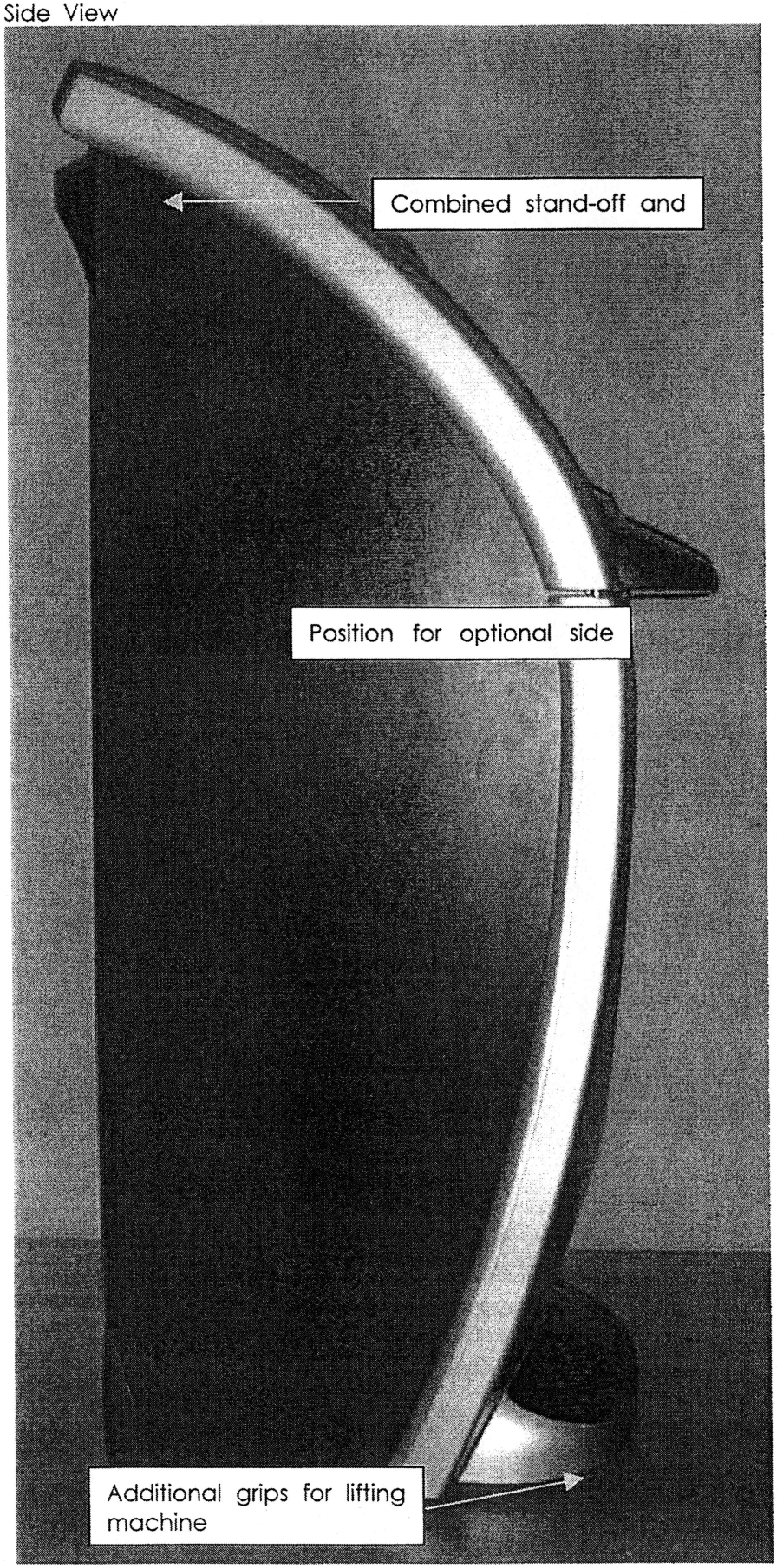
3.6.2 Accessories

Pos.	Artikel no.	FW-Order-no.	Description
	5002898	5002898	Data Print 3000
	5002884	5002884	Data Print paper
	7200672	7200672	Postcard
	7299998	7299998	Photo Play test stand (Robot)
	7200792	7200792	Special drill ventilator curcular cutter 30-162mm
	7200231	7200231	Keyboard in keyboard bag from tool kit for Photo Play
	7200721	7200721	Token Photo Play
	7200183	7200183	TV Converter
	7200058	7200058	Tool kit Photo Play without keyboard
	7200070	7200070	Tool kit Photo Play incl. keyboard
	Subject to change		Update Station complete

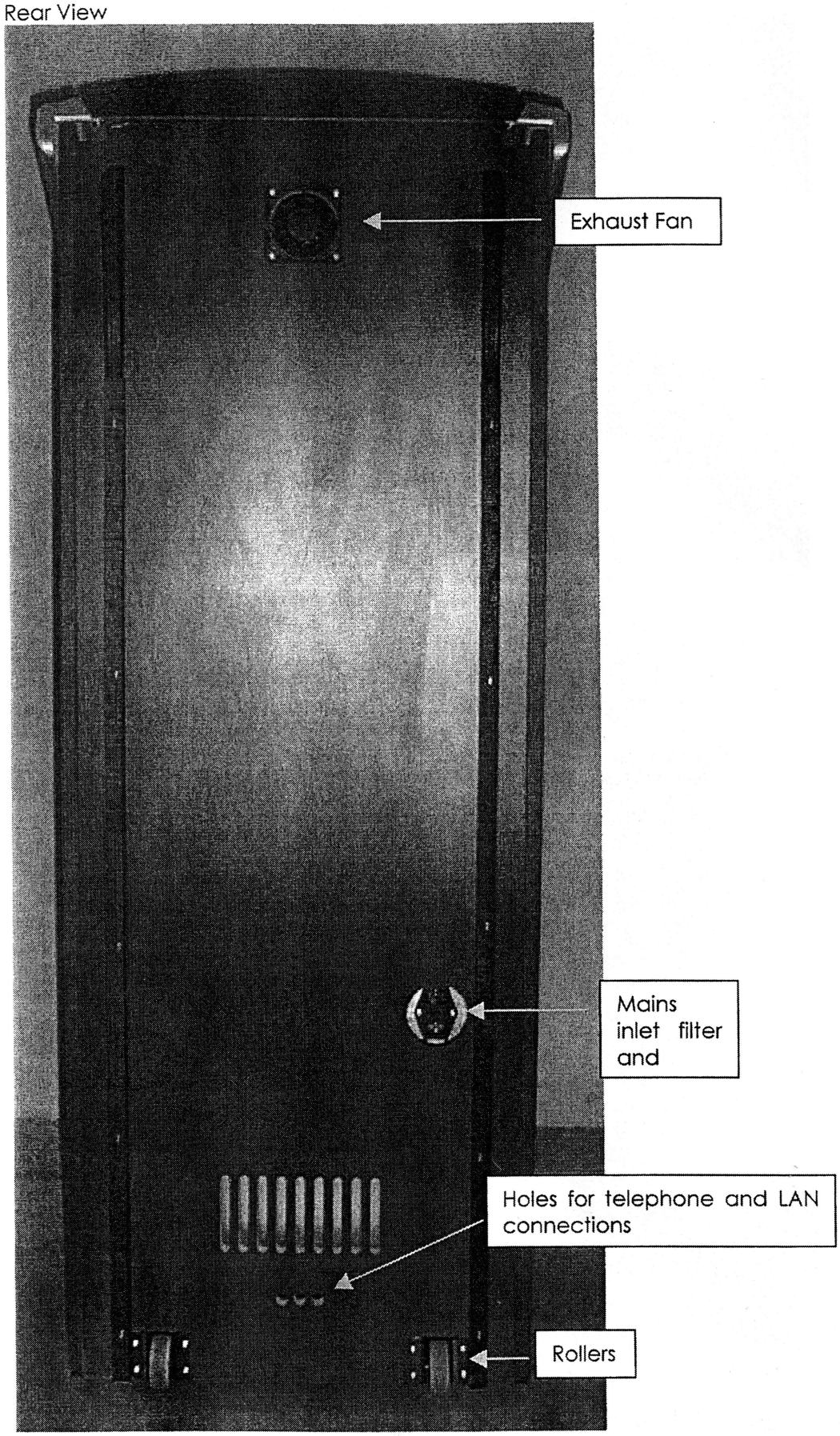
3.7 Photos
Front View



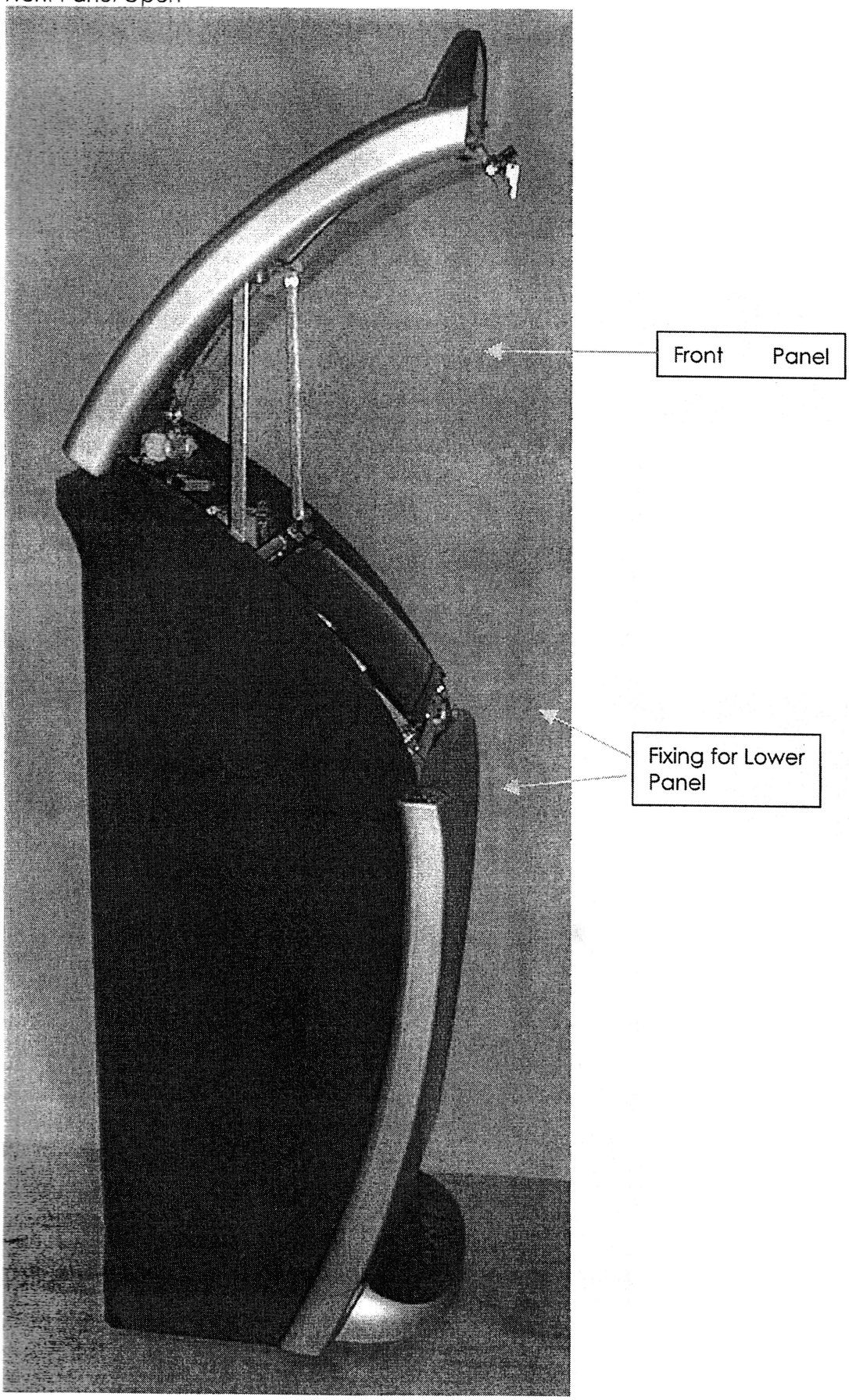
Side View


Combined stand-off and
Position for optional side
Additional grips for lifting machine

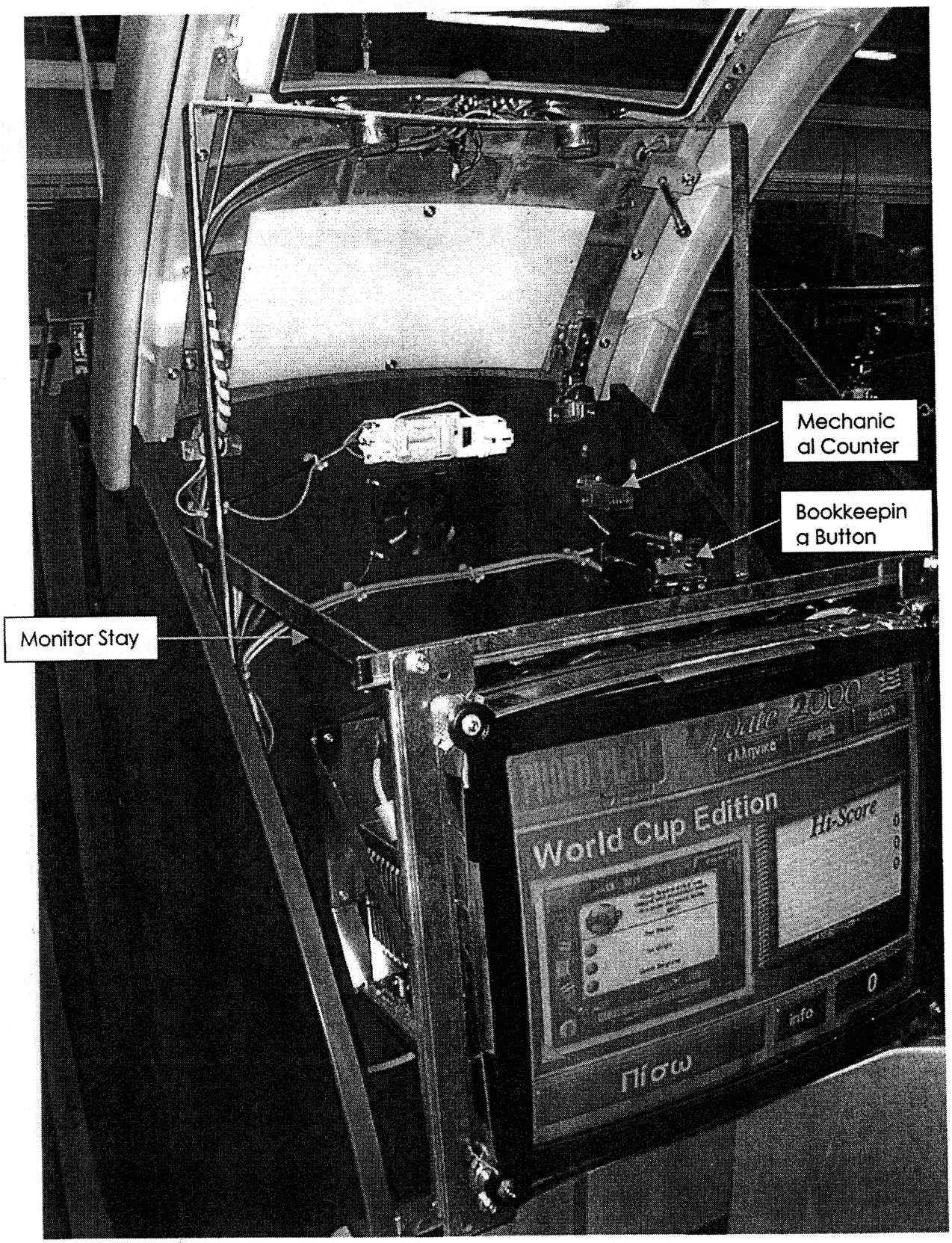
Rear View


Exhaust Fan
Mains inlet filter and
Holes for telephone and LAN connections
Rollers

Front Panel Open



Upper Section



Lower Section